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Original Communications.

ARTICLE I.

PUERPERAL LACERATION OF THE CERVIX UTERI, AND THE OPERATION OF TRACHELORRHAPHY * AS A MEANS OF CURE.

By E. C. DUDLEY, M.D., Chicago, formerly House Surgeon to the Woman's Hospital in the State of N. Y. Read before the Chicago Gynæcological Society, Jan. 31, 1879.

The two memoirs of Emmet † contain about all that is known of laceration of the cervix. Breisky,‡ of Prague, and Rokitansky, Jr.,§ of Vienna, have reported a number of successful cases. Breisky gives to Emmet the entire credit of having established the pathological significance and treatment of this lesion, but says that W. Roser,‖ in 1861, described the same condition under the

* "This term was first employed (to my knowledge) by Dr. E. C. Dudley, now of Chicago, in a paper published in the *N. Y. Medical Journal* for January, 1878, and is derived from τράχηλος, neck, and ῥαφή, seam. I have adopted it because I think so important an operation should have a distinctive name of its own, and for convenience sake."—Mundé, in *Am. Jour. Obstr.*, January, 1879.

† *Am. Jour. of Obstetrics*, Nov, 1874. *Am. Practitioner*, Jan., 1877.

‡ *Wiener Med. Wochenschr.*, 1876.

§ *Wiener Medizinischer Presse*, July, 1876.

‖ W. ROSER, *Archiv. für Heilkunde*, II., 1861.s.97.

name cicatricial ectropion of the cervix. The name cicatricial ectropion, formulated by Roser, involves a contradiction, for the presence of cicatricial tissue about the os could not cause ectropion or eversion, but by its tendency to contraction would have the opposite effect if any. Howitz,* of Copenhagen, with an experience of seventy-six cases, pronounces unqualifiedly for laceration as the essential cause of eversion, erosion, cystic degeneration and subinvolution, and for Emmet's operation as the only means of cure. A few other contributions in Germany† and America‡ have appeared merely as endorsements of the memoirs of Emmet. These have been designed not to be original, but to awaken the profession to the immense importance of the subject.

Either from absolute ignorance, or from profound prejudice, or from a carelessness which in the law would amount to malice, the most exhaustive gynæcological works in England,§ France‖ and Germany¶ are absolutely silent. No published opposition, however, has appeared, perhaps because every man who has made investigation enough to warrant him in writing his experience, has been converted.

In the excellent paper of Mundé**, illustrated by twelve elegant and much needed lithographic plates, mention is made of Gardner's †† work on sterility, published in 1856, in which he finds that this author "repeatedly speaks of '*laceration of the cervix*' as productive of ulceration, hypertrophy of the cervix, endo-cervicitis and sterility," but points to no special means of diagnosis or operative treatment. This work contained two colored plates, in illustration of "fissure of the os," and "ulceration."

History and Pathology.—When we remember that the external os of the non-pregnant uterus has a diameter of about one-fifth of an inch, and that this diameter must be increased at term to

* Gynäcologiske og Obstetriciske Meddelelser, V.I., No. 3, 1876.

† Ruge and Veit Zeitschrift f. Geburtsh. u. Gynäkologie II., 1878.

‡ Wing, *Boston Med. and Surg. Jour.*, March, 1876. Baker, *Boston Med. and Surg. Jour.* Sept., 1877. Dudley, *N. Y. Med. Jour.*, Jan. 1878. Dudley. *Am. Jour. Ob.*, Oct., 1878. Harrison *Va. Med. Monthly*, Dec., 1874. Chase, Transactions of N. Y. S. Med. Society, Jan., 1878. Goodell, Transac. Med. Soc. State Pa., May, 1878. Mundé, *Am. Jour. Ob.*, Jan., 1879.

§ Barnes.

‖ Lebold.

¶ Hegar, Kaltenbach, Schroeder.

** *Am. Jour. Obstetrics*, Jan., 1879.

†† The Causes and Treatment of Sterility, etc., by A. K. Gardner, A.M., M.D., N. Y., 1856.

the diameter of the child's head, we may readily suppose laceration of the cervix to be a common accident. It is now a recognized fact that some degree of laceration attends the majority of labors. This lesion is generally slight, and heals so readily that it is of little or no pathological significance. In lacerations through the anterior and posterior lips healing is the rule; this, Emmet says, is due to pressure of the lateral vaginal walls, which keep the "raw surfaces in close contact until they have firmly united."

Anterior laceration may extend so far as to invade the bladder, and make a vesico-utero-vaginal fistula, but even then healing often follows spontaneously, if attention be paid to cleanliness and position, leaving nothing to mark the laceration save a small vesico-vaginal fistula at the utero-vaginal attachment, or a utero-vesical fistula at the angle or bottom of the laceration, extending from this part of the cervical canal into the bladder. I have seen two cases of utero-vesical fistula due to this cause, in which healing had gone so far as to occlude the external os uteri. The menstrual blood in these cases passed away through the urethra.

Posterior laceration extending into the vaginal cul-de-sac may by creating cellulitis give rise to contracting cicatricial bands and effused lymph, and these may draw the uterus downward and backward, and fix it there in an almost incurable retroversion; permanent sterility in these cases is inevitable, and is doubtless due, in part at least, to obliteration of nature's reservoir for seminal fluid, the vaginal cul-de-sac.

In lateral lacerations, nature, instead of repairing the injury, resorts to a deception so artful that this lesion had been practically an unknown factor in uterine pathology until exposed by Emmet, in 1862. I refer to the substitution for the normal cervix of an apparently genuine * cervix, composed of everted intra-uterine and reflected vaginal tissue; a deception so complete that it sometimes fails to be detected even by the practiced eye. Indeed, if the differential diagnosis between normal and lacerated cervix were dependent solely upon ocular examination, cases would commonly arise in which increased size, congestion and a so-called "ulcer," would be the only differential signs. The formation of

* The false cervix here referred to includes only the vaginal portion of the entire cervix uteri.

this false cervix is indicated in the papers of Emmet, and what I shall add will only tend to corroborate his already established views.

Some of you will recall a paper by Dr. John Bartlett,* of Chicago, on the cervix before, during and after labor. The facts upon which Dr. Bartlett based his conclusions are entirely accessible, and are verified by the plates of Wilh. Braune,† of Leipzig, drawn from sections of the frozen gravid uterus. These conclusions which I introduce on the authority of Dr. Bartlett, harmonize with the history of lacerated cervix; they are, that from the moment of pregnancy the cervix as well as the body of the uterus enlarges to accommodate the growing fœtus, that the entire cervix from the first expands symmetrically with the body above, except a small portion which surrounds the external os; that this expansion very early in pregnancy obliterates the internal os, and converts the entire cervix into an inverted dome, which projects into the vagina, and whose walls are continuous with those of the body above. So that long before term a very large portion of the fœtal envelope is composed of evolved and expanded cervical tissue. Now, during labor there must be some point in this cervix above which all the tissues contract for the child's expulsion and below which they dilate for its exit. After delivery, examination shows, at a point above the normal site of the external os, about on a level with or a little below the plane of the utero-vaginal junction, the familiar, hard, unyielding ring vaguely called the os, regarded by Bartlett as the internal os, which seems impossible, since its location is at or below the vaginal junction, while that of the internal is considerably above. Neither can it be the external os, since its location is too high; it must, therefore, be between the two, at the very point just mentioned, above which contraction and below which dilatation occur in labor. It is, therefore, a temporary intra-cervical os, below which we must look for all that part of the cervix which during labor was compelled to undergo excessive dilatation, and expect there to find laceration, if it be present. Now, without great care, this portion of the cervix, which has been so stretched that it cannot

* *Chicago Med. Jour.*, Oct., 1873.

† Atlas of Topographical Anatomy, translated by Belamy, Philad., 1877.

immediately recover its contractile power, will be entirely overlooked, but it is always to be felt projecting into the vagina as a "flabby floating collar," not unlike "a section of large intestine," and as destitute of contractile power as the sphincter ani muscle after extreme forcible dilatation by the method of Van Buren; it is usually one or two inches in depth, and so deceptive to the touch that Dr. Bartlett, as he assures me, has often attempted to remove it by the finger for a clot of blood. After normal labor this slowly recovers its contractile power, and in a few days resumes its normal shape, and the external os is thereby restored.

But if bilateral laceration occur, nature has all the conditions for the formation of the false cervix already mentioned. The diverging flaps, as Emmet says, are at once forced in the directions offering least resistance, the posterior catching on the recto-vaginal wall and crowding backward into the vaginal cul-de-sac and the anterior forward in the axis of the vagina. The congested tissues about the temporary os, which we have called intra-cervical, meeting no resistance, now roll out, and this eversion, by obstruction to the circulation, causes the tissues to become so gorged with blood that they no longer have sufficient space for their accommodation within the uterus, and the eversion continues until tissue enough for the formation of a spurious cervix has been rolled out into the vagina, and until the temporary intra-cervical os has actually usurped the place of the normal os externum, which had been destroyed. When the patient assumes the upright position, all these distortions are exaggerated. Then the congested uterus by its weight settles lower in the pelvis and carries with it a reflected fold of the vaginal membrane, and the cervix is thus made to appear longer than it actually is. This deception may be exposed by placing the patient in the knee-chest position, when the uterus by its own weight will be carried towards the diaphragm, and the consequent unfolding of vaginal membrane will disclose the true utero-vaginal attachment, and not uncommonly expose a deep laceration on either side, which in the ordinary examination had been overlooked. The rolled out intra-uterine tissue of which the false cervix is composed, and the remains of the lacerated lips of the genuine

cervix during involution, are so soft and easily molded that, resting in their prolapse upon the floor of the pelvis, they may gradually take the form of normal cervix, and the temporary intra-cervical os, which has usurped the place of the normal os externum, may appear at the very crown of this new cervix as a slit, perhaps not more than one-fourth inch long, the only remnant of a rent extending often an inch or more into the vaginal tissues on each side.

When the laceration is confined to one side, the deception is even greater, for, as shown by Emmet, the fundus in such cases is usually drawn towards the affected side by inflammatory contraction of the nearest broad ligament, the seat of a former cellulitis, which is a common result of laceration. The effect of this latero-version is to raise the uninjured side of the cervix a trifle higher in the pelvis and correspondingly to depress the injured side, thereby causing a reflection of the vaginal membrane on the depressed side, so that as in the bilateral injury the apparent os externum may seem to be in the very centre of the cervix when it is on the side, and to add to the confusion the sound entering at the side may, by passing to the horn of the opposite side of the uterus, appear to pass in the median line.

That laceration of the cervix causes marked outrolling of intra-uterine tissue, and a consequent permanent, passive congestion, is established beyond all question. The delicate intra-uterine membrane is then in contact with the irritating acid secretion of the vagina, instead of the milder alkaline secretion of the uterus to which it is accustomed. But the mischief does not end here. The uterine supports soon prove unequal to the work of sustaining in position the uterus, now heavy from congestion, and it falls lower in the pelvis, where it remains generally in some form of version. The everted membrane, in contact with the posterior vaginal wall, is subject to the additional irritation of friction, an erosion or "ulceration" forms, and the mucous follicles, estimated by Tyler Smith * to number ten thousand in a normal virgin cervix, become diseased, and some of them pour out the familiar thick, colorless, viscid, ropy

* On Leucorrhœa, Am. Ed., page 38.

secretion, while others, their outlets having been occluded, become distended by their own secretion, and undergo cystic degeneration. I recall one case in which I must have emptied, by puncture with the Buttle's lance, hundreds of these little cysts in the treatment preparatory to operation. These cysts are generally present, and frequently in large numbers.

The uterine prolapse, in the words of Emmet, causes the broad ligaments to be "put upon the stretch," and by the consequent obstruction in the channels of blood and nerve supply which traverse these ligaments, we have additional cause of congestion and faulty innervation. Dr. Thomas* lays down the three following abnormal developments in the uterus as the basis of uterine pathology:

FIRST. *Disorders in innervation and circulation.*

SECOND. *Change in quantity of connective or muscular tissue.*

THIRD. *Change in position.*

He adds that either of these three being the primary lesion, the other two, singly or combined, may be its consequences. The first and third we already have; the second is their inevitable result.

Diagnosis and Treatment.—Laceration of the cervix, until demonstrated by Emmet, was known only by its effects, and accordingly the following names were applied to designate their extent and character: "erosion," "excoriation," "granular erosion," "ulcer," "papillary erosion." These erosions, when exaggerated, were called cock's-comb granulations, or cauliflower growths, a condition simulating malignant disease, and when the cervical follicles were involved, follicular ulcer. In general "ulceration" became the popular and fashionable diagnosis. Even now, after seventeen years of demonstration to the contrary, the entire profession of Europe except a few Germans, and a large majority in America, fully asleep to the vast importance of Emmet's discovery, continue to mistake the cause for the effect, and treat the symptoms instead of the lesion itself. Never was a false theological dogma more thoroughly ground into a credulous people than this unfortunate though patent delusion of ulceration is now ground into the intel-

* Diseases of Women, page 208.

ligent medical profession. Except in specific disease, genuine ulceration is rarely if ever found on the cervix. Thomas* apologises for using the word, and says that "what is called ulceration on the cervix is called granular degeneration when it occurs under the lids."

When a case of uterine disease following parturition comes with a previous diagnosis of "ulceration or erosion with cervical enlargement and patulous os," we merely have to translate these words nto laceration of the cervix, and the diagnosis is correctly made. True, the "ulceration or erosion" is present, but that is a *fact*, not a *diagnosis*.

There is a form of erosion solely dependent upon an irritating discharge from the endometrium or vagina, apt to occur in feeble and badly nourished subjects, and not very uncommon in virgins; a condition analogous to the familiar erosion and excoriation produced by prolonged nasal discharges on the upper lips of children. Such an erosion is readily distinguished from that of laceration by the absence of eversion, absence of marked cervical enlargement, by the presence of a normally shaped os externum, and by physical examination soon to be described. It may be cured by removing the cause. It is generally associated with laceration, and when associated its treatment should be insisted upon as preparatory to the operation.

The presence of cystic degeneration of the mucous follicles of the external cervix, I believe to be pathognomic of laceration. These little cysts (already mentioned) feel to the touch like small shot scattered over the submucous tissues of the everted cervix. I have looked for them in hundreds of cases of uterine disease, but have never found one except on the lacerated cervix. My clinical experience also harmonizes with the histology of the intracervical membrane, as given by Stricker and Frey.

† "Lodged in the substance of these ridges (rugae cervicis), *excepting only in the lower and smoother part of the cervical canal*, we discover the so-called mucous follicles of the cervix."

‡ "Not unfrequently these little pits (mucous follicles) become occluded,

* Diseases of Women, page 303.

† Stricker's Manual of Histology, Am. ed., page 614.

‡ Frey's Histology and Histo-chemistry of Man, Am. ed., page 548.

and in consequence distended with mucus. They then present themselves in the form of small round vessels, known as the ovula nabothi."

* "These bodies (the ovula nabothi) are even found on the outer surface of the vaginal portion of the uterus."

If these follicles are normally found only within the cervical canal, it is clear that their presence in contact with the vaginal membrane must depend upon eversion, which I think never occurs to the extent of exposing the rugæ, except as the result of laceration, or of some other decided mechanical injury. Stricker finds the cysts or "ovula nabothi" "on the outer surface of the vaginal portion of the uterus," and concludes that they are distinct anatomical elements, although identical in structure, while Frey declares that the ovula nabothi are simply occluded mucous follicles, which Stricker says do not exist on "the outer surface." I therefore cannot escape the suspicion that the investigations of Stricker's "ovula nabothi" were made on the lacerated and everted cervix, not upon the virgin cervix.

The presence of the lesion may be detected in ordinary cases by the touch, but for the intelligent study of all cases, and for diagnosis in the more obscure, additional exploration is essential. The most reliable means are two uterine tenacula and Sims' speculum. The tenacula are absolutely essential, and I am fully convinced that their importance is not appreciated by many who, neglecting their use, not only fail in diagnosis, but question the accuracy of others who succeed. With these instruments, Emmet first untied the knot and revolutionized almost the entire pathology and treatment of cervical disease. The late Dr. Peaslee,† in his remarks on this subject before the N. Y. Co. Med. Soc., referring to the large number of cases of so-called ulceration, says "that they were not recognized, for none of us knew anything about them till Dr. Emmet told us. It was he who, in a happy moment, brought the anterior and posterior surfaces together with tenacula, and instantly demonstrated that what we all supposed an ulceration was nothing more or less than a laceration."

I quote the following from Dr. Emmet's first paper, published

* Stricker's Manual of Histology, Am. ed., pages 614 and 615.

† Mundé in American Jour. Obst., Jan., 1879.

in the *Am. J. Obst.*, Nov., 1874, twelve years after his first operation:

"November 27, 1862, I first operated for the relief of a double lateral laceration of the cervix, by freshening the surfaces and bringing together the anterior and posterior flaps with interrupted silver sutures. This patient had been an invalid for several years before coming under my care, and had been treated for menorrhagia and hypertrophy of the uterus, with an extensive erosion. She was undersize, of a naturally delicate constitution, and after a severe and protracted labor, with difficulty had given birth to a large child. Her general appearance indicated incipient phthisis, but no evidence of a tuberculous deposit could be detected. The uterus was some four inches in depth, and an erosion extended about two inches in diameter over an enormous cervix. With great care this erosion had been healed several times, by maintaining the recumbent position for a sufficient length of time, but a relapse to the former condition recurred in each instance shortly after beginning to exercise by walking. I had almost despaired of being able to offer her any permanent relief, and attributed my want of success to the condition of her general health. While making a digital examination one day I was puzzled to account for the greater width of the cervix in comparison to that of the body beyond, a condition I had for the first time appreciated. I placed her on the left side, and with Sims' speculum brought the cervix in view. I drew the posterior lips forward toward me with a tenaculum, but with no special purpose, when I was surprised to observe that it had decreased to nearly half its previous size. On lifting up the anterior lip with a tenaculum, in the other hand, so as to bring the two portions in approximation, the outline of a cervix presented, of nearly a normal size. The difficulty was at once apparent, for the parts had rolled back within the uterine canal, and a deep lateral fissure became evident, which extended on each side entirely through the cervix and beyond the vaginal junction. On separating the flaps and forcing them back to their former position, I saw the tissues gradually roll out, and the cervix again present its previous appearance. There could then be detected no appearance of laceration, and with the reduplication of vaginal tissue over the sides of the uterus, as I have already described, the cervix presented a normal length above its apparent junction with the vagina. The remedy at once suggested itself; the operation was performed with the aid of my assistant, Dr. G. S. Winston, and I believe Dr. T. G. Thomas was also present. On completing the operation, the uterus was five inches in depth, it rapidly reduced in size, and in time all evidence of local disease subsided, but she never entirely regained her general health. Some seven years after the operation, Dr. F. N. Otis, of this city, her family physician, detected a tuberculous deposit, and she has died of phthisis within a few months, having been ten years under my observation. For two years previous to her death she had resided abroad, but, as a friend, I was kept advised of her condition, and she continued free from uterine disease. I am fully satisfied, at the time of the operation her condition was so critical that it would have been but a question of a few weeks before a tuberculous deposit would have

taken place. Although she never recovered fully the loss of vitality to which this injury had reduced her, yet her life was beyond question prolonged many years by the operation."

After the reading of this paper before the N. Y. Co. Med. Soc., Sept., 1874, Dr. J. Marion Sims said:

"When I went abroad in 1862, amongst the patients I turned over to the care of Dr. Emmet was the lady whose case forms the basis of the paper he has just read. She belonged to the upper walks of life, and had been under my charge for twelve or eighteen months. I remember the peculiarities of her case, so well described by Dr. Emmet, as vividly as if it were but yesterday. The bilateral laceration of the cervix, and the consequent eversion of the hypertrophied, congested cervical mucous membrane constituted at that time a difficult problem to solve. During the whole time that I observed this case no benefit resulted from local treatment, and I am sure that nothing short of the method so successfully adopted by Dr. Emmet could have been of the least service to her. I now only wonder that this operation had not been worked out sooner. When the perineum is lacerated, the necessity for its reconstitution is self-evident, and it is singular that the necessity for reconstituting the integrity of a lacerated cervix did not sooner force itself upon the surgeon. The operation as devised and practiced by Dr. Emmet is as simple, as safe and as certain in its results, as is the operation for a simple case of vesico-vaginal fistula. The same principles underlie each. The same free denudation of tissue, the same method of suture, the same after-treatment, and the same security from danger, belong to both alike.

"I have performed the operation often enough to speak in positive terms of its value. The discussion of the subject must, of necessity, be one-sided. There can be no objection, no opposition to the operation. We must accept it as Dr. Emmet has given it to us. We can't modify the operation; we can't change it; we can't improve it—for it is perfect—perfect in its method, and perfect in its results.

"We owe to Dr. Emmet a debt of gratitude for this valuable contribution to uterine surgery. Like all new operations it is likely to be abused, but the time will soon arrive when it will assume its place in the foremost rank of useful improvements.

"After the subject had been discussed by other members of the society, Dr. Marion Sims rose again, and said: 'I am personally so impressed with the importance of Dr. Emmet's paper in a practical point of view, and so pleased with the manner in which he has presented it to our consideration, that I beg leave to move a formal vote of thanks to Dr. Emmet for his most valuable contribution to surgery.'"

The preparatory treatment insisted upon by Emmet is absolutely essential to the best results, and has for its object the healing of the erosion by mild topical applications, the reduction of the congestion by the hot vaginal douche applied for twenty min-

utes twice daily, the puncture and emptying of the cysts, if any be present, replacement by mechanical support if indicated. The operation is strictly contra-indicated by the slightest evidence of peri-uterine cellulitis or pelvic peritonitis. If performed after suitable preparation it will be followed by prompt disappearance of congestion and rapid involution.

But is there no means of accomplishing these results without the application of sutures? Before proceeding, I desire, even at the risk of prolixity, to indicate once more the pivot upon which this cervical disease rests—contact of a congested intra-cervical membrane with the irritating acid secretion of the vagina, and its consequent exposure to friction and other mechanical injury. The disease then depends upon the hostile surroundings of an already congested membrane. Any reasonable plan of treatment must therefore look to replacment of the membrane to its normal position within the uterus, or to modifying it so that it may successfully resist its abnormal hostile surroundings. Much may be accomplished by the mild treatment already pointed out as preparatory to operation, and many of the milder cases may be cured. But a large number remains which can only be benefited, and still another large number upon which this sort of treatment has no effect whatever. Even those supposed to be cured are in danger of relapse. We have then, in this treatment, a valuable and indispensable aid to the operation, not a substitute. The everted membrane can neither be securely replaced by these means, or so modified as to endure its hostile surroundings. Again we ask, How shall this membrane be changed? There is but one reply, by cauterization, persistent and prolonged until the everted membrane has been replaced by a covering of dense, contracting, cicatricial tissue. If ordinary caustics are not powerful enough, we must invoke the caustic potassa and the actual cautery, and should these fail, amputation.

Ample authority of high order, for this practice, may be drawn from every capital in the civilized world. Dr. Thomas,* under granular ulceration, says:

"Should eversion of the cervix exist, the hæmorrhoidal mucous membrane should be at once removed by the scissors or by the curette, and should much

* Diseases of Women, page 358.

gaping of the os be present, the actual cautery or lunar caustic should be employed. I have spoken so freely elsewhere of the danger of producing cicatricial contraction of the canal and induration of the cervix that it requires no further mention here; in eversion however a certain amount of contraction is to be desired."

I am aware that this quotation does not fairly represent the present views of Dr. Thomas. He now recognizes the true cause of granular erosion, and, excepting Emmet, perhaps operates more frequently than any other man in the world.

Dr. Jacobi, of N. Y.,* recommends the actual cautery in cervical erosions, and claims to have been the first to use it in such cases.

Under "ulceration and enlargement," Dr. Byford† says:

"It is a very obstinate and discouraging state of the disease, but will usually yield to sufficiently energetic and long continued treatment. The boldness in the use of caustics necessary to the cure of such cases as these, requires strong nerves to institute and thoroughly execute."

Under "thoroughness and perseverance in the use of the caustic," he says:

"Failures occur very frequently on account of too little being done by the caustic. * * The treatment must be persevered in until the cure is complete."

Under the chronic or ultimate effects of the caustic is added:

"In very many cases where the application is made to the os uteri for several months that orifice becomes so small as to be of the size of a mere pinhole. * * . We need not be embarrassed in our treatment by this occurrence, as we can easily dilate the os uteri to almost any extent by tents of compressed sponge or slippery elm bark bougies. By using one of these tents or bougies twenty-four hours before we desire to make the application, the opening will be large enough to answer all purposes."

These then are the agents to be substituted for Emmet's operation. But there is strong evidence going to show that the substitution of a hard-contracting scar for the cervical or endometrial membrane may irreparably incapacitate the uterus as a reproductive organ and exercise a very pernicious influence upon the general nervous system.

It is axiomatic that the os uteri contracted to the size of a mere

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* *Medical Record*, March 9th, 1878.

† Byford on the Uterus, pages 99, 174, 180., 1871. [Since the reading of this paper Dr. Byford has informed me that he has almost entirely abandoned the use of nitrate of silver and topical applications to the uterus, and has substituted agents of a milder nature.—E. C. D.

pin-hole is incapacited for the passage of the menstrual and seminal fluid.

It is evident that the attempt to enlarge a cicatricial canal by dilatation or incision will invariably be followed by a marked tendency, at least, to recontraction.

It is highly presumptive that a hard-contracting cicatricial cervix would not participate fully in the evolution of the gravid uterus, and that in labor, its rigidity would occasion delay and subject it to great danger of rupture.

A priori, therefore, we may conclude that the cicatricial cervix is crippled, if not incapacitated for the natural performance of its menstrual and other reproductive functions.

But Dr. Emmet* asserts that cicatricial tissue on the cervix is frequently the cause of excessive nervousness and neuralgia in other parts of the body, and that, by the inclusion of nerve filaments, as in sensitive stump after amputation, it may serve as a constant and hidden source of nerve irritation. He has observed in his immense experience, covering thousands of carefully analyzed cases, that the anemic nervous neuralgic diathesis is peculiarly liable to be associated with cicatricial cervix. That the cicatrix and this diathesis have the relation of cause and effect I freely admit remains yet to be proved, and, to that purpose, I submit the following brief reports of two cases as evidence.

† A lady consulted one of the most distinguished ophthalmologists in America for a long-standing, severe and obstinate neuralgia of the eyeball. As the only possible means of relief extirpation of the eye was finally advised ; this operation the patient declined and the pain continued. She was subsequently operated upon by Dr. Emmet for laceration, and in the operation he removed a wedge-shaped piece of cicatricial tissue from the angle of the laceration which nature, in the vain attempt to bridge over the gap, had placed there. Immediate and permanent relief followed.

In April, 1878, I performed a similar operation upon a lady in La fayette, Ind. She had for years suffered from almost constant pain in the top of the head, and up to the time of the operation every resource of treatment had failed.

In this case the cervix was not eroded, but from the perseverance of some one in making caustic applications, it had suffered considerable loss of substance. The indurated tissue was very marked and abundant, so that I

* His two memors on laceration.

† I am not aware that this case has been published. This brief reference is drawn from the verbal report of Dr. Emmet. E. C. D.

was compelled to sacrifice an unusual amount of the cervix in its thorough removal. Entire relief from pain followed. A letter from her physician, Dr. E. D. Powers,* in the casual mention of the case, states that she now enjoys excellent health.

These cases are only two of a large number which strikingly illustrate Emmet's views of the effects of cicatrical cervix.

This subject of wholesale cauterization of the uterus is of vital importance and ought to be agitated until it is better understood, and therefore better appreciated. We certainly have facts and probabilities enough to suggest the question, whether the cautery which requires "strong nerves" on the part of the doctor, does not require stronger nerves on the part of the patient?

In vivid contrast with the cautery is Emmet's operation, for it cures not by producing, but by removing the cicatrix.

During a residence of eighteen months at the Womans' Hospital in the State of New York, I had opportunity of observing and treating several hundred cases of uterine diseases. Of this number many came from their attending physicians with the diagnosis of hypertrophy and elongation of the cervix and had been sent in the expectation of amputation—an operation which, except for malignant diseases, is unknown in that institution, not having been performed, to my knowledge, for more than two years, in the combined services of Drs. Peaslee, Emmet, Thomas and Barker, although cases were continually presenting themselves in which the popular treatment would have been amputation. The brief report of a single case will illustrate them all.

An excellent description of the appearance presented by this case may be found in many of the popular gynæcological treatices under the head of Hypertrophy and Elongation of the Cervix.

It presented the apparent elongation of both anterior and posterior lips of the cervix, which were actually protruding through the vulva. The utero-vaginal attachment appeared at about its normal distance from the vulva, so that the vaginal portion of the cervix seemed to point clearly to the diagnosis of extreme hypertrophy of the anterior and posterior lips. These lips were entirely separate from one another to the extent of their elongation, which appeared to be about three inches. In examining this patient for admission to the hospital, my first impression and also that of my senior assistant, Dr. VanVorst, was that of two large uterine fibroids protruding from the uterus into the vagina, but upon closer examination we agreed that it

*I regret that the time is now too short to obtain a more definite history respecting the continued absence of pain.

was a case of true classical hypertrophy of the anterior and posterior lips. Knowing that Dr. Emmet had denied the possibility of such hypertrophy, we assigned the patient to his service, and waited his next visit. He promptly placed the patient in the knee-chest position, and introduced Sims' speculum; the vagina filled with air, the uterus was carried by gravity toward the diaphragm, the true utero-vaginal attachment now appeared in its true relation, about an inch from the end of the cervix, a deep laceration extending into the vaginal walls more than two inches on each side was evident. The depth of the uterine canal, measured by the probe, was nearly six inches; it was a case of sub-involution and procedentia, depending upon extensive laceration, of eight years' standing. After four weeks of preparatory treatment the rent was closed with about twenty silver sutures. Union was by first intention. In another month the canal measured three inches in depth, and before this patient was discharged, senile atrophy of the uterus was actually commenced. In another similar case, in which the apparent elongation was symmetrical, not specially involving either lip, but the entire cervix, the laceration was unilateral.

Barnes, of London, on Diseases of Women,* presents three notable cuts, illustrating what he calls hypertrophy and elongation, a condition in which he advocates amputation. Should he ever make proper use of the knee-chest position, the Sims' speculum and the two uterine tenacula these plates will become valuable, for he would then use them to illustrate *laceration of the cervix with procedentia and subinvolution.*

It has never been claimed that Emmet's operation is a panacea. It is only a safe, reliable, efficient and practical means of removing such abnormal conditions of the uterus as eversion and its consequent erosion, or "ulceration," congestion, "patulous os," subinvolution and uterine catarrh. More than this has never been asked or expected of it. That it will with entire safety accomplish some of these results in every instance, and frequently all of them, is shown in the history of hundreds of cases.

The operation is as safe and simple as that for vesico-vaginal fistula and requires equal skill. The indication for its performance is eversion of the intra-cervical membrane. Dr. Paul F. Mundé,† in his recent and notable paper, makes a strong plea for the early performance of this operation, believing it to be the most prompt and efficient treatment, in all cases of sufficient ex-

* Barnes, Diseases of Women, pages, 120, 121, 122.
† Am. Jour. Obstetrics. Jan. 1879.

tent to produce pathological effects. From his paper, I make the following quotations.

"At a meeting of the New York Obstetrical Society, held Nov. 20th, 1877, Dr. Alex. J. C. Skene, the President, expressed the opinion that there were many abnormal conditions of the cervix uteri, other than laceration, which could be cured better by this plastic operation than by any other means. While he did not explain himself more precisely, I drew the inference that he alluded to conditions very similar to those which I have been describing (*slight laceration*), and which I have looked upon as, under proper conditions, calling for the operation.

"Another reason why trifling ectropia should not be allowed to go on for years unheeded and untreated, was recently advanced by Prof. Breisky,* of Prague, who has observed and operated upon four cases ot laceration in which one of the everted lips had become carcinomatous in consequence of the irritation to which the exposed cervical mucosa was subjected. These observations are confirmed by Veit,† who, out of nine cases of carcinoma-cervicis, found three in which the disease originated in the enlarged glandular elements."

Emmet, in his memoirs, preceded Breisky in suggesting this relation of laceration to malignant disease.

Dr. Skene, in the Proceedings of the Medical Society of the County of Kings, June, 1878, advocates the substitution of silk for wire sutures. With these he had operated eight times in his office and sent the patients home in the street cars, to return in a week or ten days for removal of sutures; in every instance union was good. These were cases of slight laceration. This plan of Dr. Skene certainly simplifies and shortens the operation, and, if in respect of safety and perfect union it prove practical, it must inevitably remove all objection to the operation in the milder cases.

I would not, however, risk the danger of this plan, even in mild cases, until its safety had been demonstrated by a large number of cases. It certainly is not applicable to lacerations extending past the vaginal attachment.

The operation, like all other surgical procedures, may be performed contrary to indications, or without suitable preparation, or with insufficient skill, and therefore to the detriment of the patient. Then the misguided practitioner should pay the penalty of his own fault; the operation should not be compelled to do so for him.

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* *Wiener Med.-chir. Rundschau*, August, 1877.

† Gynecol. Sec. German Congress of Physicians, 1877.

Article II.

The Microscope in its Relation to Medicine and Cerebral Pathology.* By J. N. DeHart, M.D., late Assistant Physician to the Hospital for Insane, Mendota, Wis.

Since the discovery of the microscope, in the 17th century, much progress has been made in many departments of science, and many revelations have been made to man, which hitherto were a hidden mystery.

Hassel in 1849 first published his Microscopic Anatomy, which was revised by Dr. VanArsdale in 1851, who issued an American edition. The volume of well executed plates which accompany this work has received much praise, which it so well merited at that day. Soon after, other works on this very important and interesting subject were published in England and America.

The many important improvements that have been made in microscopical appliances enable the student and physician of the present day to ascertain many hidden facts which, only a few years since, were not known.

While there are a great variety and number of microscopes now made and offered for sale, yet those only who have studied with the microscope know the comfort and satisfaction to be derived from the use of a good one; and by this is meant not only excellence in object glasses, although these are the most essential to a good instrument, but excellence in all the details of accessory instruments, and in nice mechanical adjustment.

Carpenter, in his valuable work, says "that of the many instruments which have been applied to scientific research, there is perhaps none that have undergone such important improvements, within so brief a space of time, as the microscope, has received the last quarter of a century; and there is certainly none whose use under its improved form has been more largely or more rapidly productive of most valuable results."

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* This paper was read before the Wisconsin Academy of Sciences, Arts and Letters, July 25, 1878, at Milwaukee, Wis.

As an optical instrument, the microscope is now at least as perfect as the telescope. In botany, zoölogy, anatomy and physiology, the student finds the microscope a very valuable and inseparable assistant.

Every microscopist, however limited may be his opportunities, has a wide range of observations presented to him in the study of the lower forms of animal life, with the strongest incentive to persevering and well directed inquiry, that the anticipation of novelty and expectation of valuable results can afford. And it is not only in the study of the minutest forms of animal life that the microscope has been found of great service, but the anatomist and physiologist, who have made the human system their especial object of study, and had been led to believe that the information obtained by their repeated scrutiny into every portion accessible to their view, was all that lay within their power, have found in this instrument of research the means of advancing further, and of gaining a much deeper insight into the mysteries of life than had ever before been thought possible.

To the German physiologist, Schwann, who, as far back as 1839, published his "Microscopical Researches into the Structure and Growth of Animals and Plants," are we indebted for the beginning of a new era in all parts of animal physiology, which comprises the vegetative life of the organized fabric. In these researches, the author had in view the study of the development of the animal tissues. He also found that although their evolution cannot be watched while in actual progess, yet their history may be traced out by the comparison of the successive stages brought to light by the microscope; and in so far as this has been accomplished, for each separate part of the organism, the structure and action of its several components, however diverse in their fully developed condition, are found to resemble each other more and more closely, the more nearly these parts are traced back to their earliest appearance.

By this retrospective study, we find that man in the beginning was an embryonic mass, composed of a congeries of cells, all apparently similar and equal to each other; tracing this farther back, it is by the aid of the microscope ascertained that all have

their origin in a primordial cell, which is the first defined product of the generative act.

In following the history of the germ from its simplest and homogeneous form to that of the completed and perfected type, we have another illustration of that law of progress from the general to the special, which is certainly one of the highest principles yet attained in the science of life. By aid of the microscope we find that the same rule applies not only to man, but also to animals and plants, which have their origin in the single cell.

And by thus persevering in our researches, by the assistance of this instrument alone, there is furnished to our visual power the history of the organic germ, from the simplest form, which, being homogeneous, seems common to every kind of living being which lives, grows, and multiplies, without showing any essential advancement upon its embryonic life.

The microscope in its use and application to the science and practice of medicine, is a very valuable adjuvant. The want of a genuine knowledge concerning the origin, nature and properties of disease germs have led Drs. Beale and Maclager to give this subject their special attention, and as the result of their labors we have two quite exhaustive works on the germ theory of disease.

Dr. Beale gives in his work several well executed drawings of disease germs, as they appeared in the microscopic field, and his views in regard to them are well received, coming from one who has written so much and so ably, after very careful microscopical research, not only at home but also abroad. He says, in relation to microscopic study, "that minute investigation in connection with disease has been most unwisely discouraged, by purely scientific men on the one hand, and by those who confine themselves to their practical medical duties on the other. By the first, because they think that medical practice affords occupation enough for one man; by the last, on the ground that scientific work unfits a man for the practical duties of the profession." It has too often happened that the very few who have devoted themselves to real medical inquiry have been unfairly treated and by the very persons who should have offered them support.

The time has now arrived when the incentive to such a course should be openly condemned, as resulting from narrow, ancient

prejudices, which have long survived their allotted time. Every intelligent person should do his utmost to further these branches of investigation, which, by aid of the microscope, have already exerted so great an influence upon the discovery of the wonderful changes which occur in the human body, in health and disease, and therefore upon the progress of medicine.

The manner in which disease germs enter the human system is very ably portrayed by Dr. Beale, and his illustrations of their development in the circulation as bioplasm, as drawn from views under the microscope, are beautifully colored and delineated. While there are a variety of opinions already expressed upon this subject, yet it is admitted that they may enter through many different sources. If suspended in the air, they may pass toward or into the air cells of the lungs at each inspiration. Some of the lightest particles might reach the ultimate air cells, where an exceedingly delicate membrane, easily penetrated by living particles, alone separates them from the blood. It is already known that disease germs, like the lower vegetable and animal organisms, will live for a considerable time in water.

According to Dr. Beale's views "of all media taking part in the wide diffusion of disease germs, and facilitating their introduction into many organisms, water, there is reason to believe, is the most general and perhaps with the exception of air, the most effective." Then, again, the particles of contagious bioplasm in germinal matter may enter the body through the skin. The epidermis being swollen and moist, living particles could easily insinuate themselves between the slight chinks which exist between the epithelial cells, and gradually make their way into the capillary vessels beneath. There are also instances in which disease germs gain access to the lymphatic vessels, and grow and multiply, thereby causing abscess in some lymphatic glands. The blood is sometimes infected, and the poison then becomes general, affecting the entire system.

By the investigations of Dr. Salisbury, who commenced his microscopical researches in 1849, we are shown that the blood in certain specific diseases contains spores and embryonic filaments. In 1866 he first published his researches, and in the *American Journal of Medical Sciences* for January there is a valuable

paper on this subject. He describes two new algoid vegetations, which he claims are the specific cause of certain diseases.

He claims that one of them attacks especially those histological elements, the characteristic proximate organic principle of which is either gelatin, ostein or chondrin. These are connective tissues proper, bone and cartilage. It first attacks connective tissue at the point of inoculation, and then is absorbed by the lymphatics in the vicinity of the primary lesion. Afterward we have the usual sequelæ of such specific poisons, with occasionally a hard swelling of the connective tissue. The last, he claims, is due to a too rapid development of the glue tissue cells, excited by the active growth of the germs (cypta syphilitica).

These minute organisms, are only seen with a good objective, and although a $\frac{1}{5}$ of an inch objective can detect their presence, yet a power of $\frac{1}{25}$ of an inch is required to make them appear in a perfect form. Dr. S. found this organism to be algoid in character, and it existed in multitudes, and in all stages of development, from the spore to the mature filaments. At the time of writing his paper, in 1868, he had examined over 100 cases, and uniformly found this vegetation; and, what is more interesting, he discovered that the same vegetation shows itself in the blood as soon as the disease becomes constitutional. Its presence or absence in the blood is believed to be a sure guide for commencing or discontinuing treatment.

The filaments, as they occur in the blood, are more highly refractive, and have the peculiar obtusely rounded extremities in a more marked degree than in some others. These crypta he describes as being minute, transparent, highly refractive algoid filaments, which develop in living organic matter from spores.

During the past year Dr. E. Cutter, of Boston, has been engaged in very careful microscopic researches in the same field in which Dr. Salisbury has already found so much that relates to the development of disease from germs. In these investigations Dr. Cutter not only corroborates all Dr. S. has published in regard to his discoveries, but goes even farther, and makes the existence of these disease germs more evident and positive.

The three micro-photographs, which I here present for your examination were received from Dr. Cutter a few days since, and

I trust that a close examination of them will convince those who are skeptical of these facts.

The first specimen of diseased blood was examined with a $\frac{1}{5}$ in. objective (3 class Tolles, X130), and shows copper colored spores and fat.

The second specimen was submitted to a power of $\frac{1}{50}$ of an inch objective (Tolles, X 1600), and exhibit mycelial filaments also copper colored.

The third specimen was examined with an exceedingly high power, $\frac{1}{75}$ of an inch objective (Tolles), and is magnified 1,950 times, showing an enlarged white blood corpuscle containing spores that are copper colored.

This last objective is the highest power that has been used in this country, and I do not think that there are more than one or two in use in Europe. It was made expressly for Dr. Hamman, of Boston, by Mr. Tolles, and the Doctor assists Dr. Cutter in his investigations. This objective was exhibited by Dr. Cutter at the recent meeting of the American Medical Association in Buffalo, and a very interesting lecture on the morphology of blood, accompanied by a stereopticon exhibition of these views, was given by him.

The microscope has been of incalculable aid to the student of cerebral pathology, and without it the pathologist would indeed be groping in the dark.

The lesions observed in the structure of the nerve cells, and in the pia-mater, dura-mater and arachnoid, which are associated with some forms of insanity, have opened up a field in pathological research, in which Drs. J. Crichton Browne, Ferrier, Herbert Major, Hughlings Jackson, Lockhart Clark, Meynert, Westphal and others in Europe, and Drs. Jewell, Hammond, Seguin, Schmidt, S. Weir Mitchell and Spitzka in this country, have already entered, and are directing much time and patient study to these important pathological changes. The microscope enables us to observe those lesions which occur in the gray cortex of the hemispheres, and in the medulla, pons and spinal cord.

The specimens which I shall exhibit by aid of the microscope are those of chronic mania and general paralysis or progressive paresis (and ossification of the falx cerebri). The second form of

insanity, which is characterized by delusions respecting great wealth and power, is accompanied by the following physical symptoms, in which there are an unequally dilated pupil, an inequality of the facial fold, want of muscular co-ordination and quivering of the tongue. The lesions observed in the gray matter of the hemisphere in this form of insanity are a general degeneration of the nerve cells.

We usually find an adhesion of the pia-mater, and a dilated condition of the vessels, although the last is also present in cases of chronic mania. The vessels in some cases are quite tortuous, but not obstructed. While the layers of the gray matter are quite distinct, the outer layer is of normal density and presents the appearance of health.

The individual nerve cells in the smaller varieties, and sometimes in the larger pyramidal cells, present characters which are to all appearances perfectly normal. There are two pathological conditions which may be observed, and are therefore quite important.

Dr. Lockhart Clarke ascribes the first condition to a loading of the cell by pigment granules, and the cell must therefore lose its normal character. Sometimes it is not much altered in size, although it is, as it were, rounded and inflated, its branches having disappeared, and nucleus gone, we find nothing but a mass of pigment granules loosely held together.

Dr. Herbert Major claims that the above description of the transformation of nerve cells is quite exceptional. The other pathological condition consists in the presence of nerve cells of immense size, located about half way in the depth of the cortical layer. They stand out like giants among the other cells, and instantly attract the attention of the observer. They are usually of pyramidal form, but frequently their contour is irregular. Their branches are quite numerous, sometimes numbering eight or ten proceeding from a single cell. The nucleus of the cell is large, but not proportional to the size of the containing body. These large cells are usually few in number, seldom exceeding ten, but are usually less, and occasionally none are found. So far, those engaged in pathological research have found them more numerous in the parietal region than in the occipital and

very rarely in the frontal lobes. While they differ in appearance from those previously described, the cell wall, nucleus and branches, being all very distinct, yet as regards their size they are not excelled. The most eminent psychologists have not advanced their opinions as to the pathological significance of these lesions, but leave the matter for further research and inquiry.

In another case of general paralysis other lesions were observed, somewhat different from those just stated.

The most external layer of gray matter presents a delicacy and whiteness to a greater degree than in health, and contrasts strongly with other pathological specimens.

There is an abnormal condition of the cell, as in other cases, and its body is shrunk, the wall being closely applied to the nucleus, which is of large size and more or less round.

As the degenerative stage progresses, no cell wall can be seen, the nucleus alone being all that is left. An inflated condition of the cell also exists.

Sometimes patches of molecular degeneration are observed in the white substance, the normal nervous structure being destroyed.

These spots have been termed by Dr. Tuke and other psychologists "miliary sclerosis."

While the above lesions are not always found on making a microscopic examination of the brains of insane persons, who have died with general paralysis or progressive paresis, yet a simple atrophy of the nerve cells is most frequently met with. It may be observed also that the nuclei of the large cells are not always swollen and rounded, as is observed in some cases of general paralysis.

In another patient who died with general paralysis the spinal cord, including the pia-mater, showed the latter, as well as the connective tissue septa radiating from it, to be thickened, and near the latter a considerable number of enlarged granule cells. On microscopic examination, a symmetrical area of the "vesicular degeneration" of Leyden was found at the floor of the sulcus collateralis, medulla cervicalis. This was small in extent, but larger on the right than on the left side. The large ganglion cells of the anterior cornua appeared some atrophic, others

brittle, and still others contained large pigment clumps, or a vitreous (amyloid) condition of the protoplasm. The pyramids of the medulla oblongata were atrophic, and there was considerable connective tissue hyperplasia to be seen in them, as well as in the restiform columns. Finely developed ependymous granulations covered the floor of the fourth ventricle.

On microscopic examination of the cortex of the frontal lobe, the pia-mater was found so intimately adherent that it could not be removed from the microscopic section, and was thickened. The gray substance was diminished in depth; the nerve elements appeared considerably diminished in number, and many triangular pericellular spaces, which usually lodge a large pyramidal nerve cell, were filled with irregular masses of detritus, with here and there a free nucleus. One nerve cell was observed which took no carmine staining, and appeared vitreous. The vessels were not well filled; their walls appeared thickened, and were more contorted than they are in normal brain, but not thrown in knots. Deiters cells in great numbers were observed near the course of the arterioles, and in one instance a clear connection could be seen between a capillary and one of these bodies. This appearance may serve as a basis for confirming the views of Magnan and Mierzejewsky (?) that vascular new formations occur in progressive paresis, cornu ammonis atrophy. This case exhibited the permanent changes so characteristic of general paralysis, and which mark the irrecoverable damage sustained by the brain in this disease.

The atrophy of the nerve elements is in strict parallelism to that obliviousness of special subjects and events characteristic of this disease, and which is the basis of their pseudo-delusions and kleptomania, for all these can be reduced to defective, in contradistinction to perverted association.

The spinal changes are similar to those observed by Westphal, and it is not definitely settled whether they represent a secondary or primary process. We observe in these lesions of the cord the cause, which results in the inability of the patient to control and regulate certain secretions.

In making a microscopic examination of the spinal cord and brain of a patient who died with chronic mania, the following

pathological lesions were found. While nothing that can be termed specifically pathological was found in the cord, yet the blood vessels were markedly injected, and there were numerous free nuclei in the adventitia of the vessels. The ganglion cells were entirely normal, with the exception of a few in the most external portion of the trigonum cervicale, which contained some pigment of a granular form; nothing noteworthy was observed in the white columns. The vessels of the brain are all injected, and thickly crowded blood corpuscles can be distinguished in the lumen of the larger and smaller arterioles; the ultimate capillaries are not so completely filled. Notwithstanding this distension of the arterioles with blood, the adventitial space appears enlarged, and in one portion of the præcentral convolutions, this adventitial space presents a cystiform dilatation. Outside the vessels and on the neuroglia border of the perivascular spaces, thickly crowded lymphoid bodies were to be seen, most marked in specimens from the frontal and temporal lobes. In many instances the track of minute vessels could be traced with a low power, by the dark rows of granules lying along this track. This is especially well seen in specimens stained with hæmatoxylin. In the nerve cells themselves no charges were observed which could be safely referred to an ante-mortem condition.

In commenting on cases of chronic mania not prominently marked by dementia, either collateral or terminal, it may be remarked that palpable changes of the essential nerve elements have never been satisfactorily shown, nor need we look for such. On the contrary, purely vascular and resulting bio-chemical changes, are fully sufficient to explain all the symptoms of such a case as the history (clinical) affords, except, of course, those dependent on perverted associations which cannot yet be referred to a somatic basis. Accordingly we find distention of the lymphatic sheaths of the cerebral vessels, as residue of long past and recent cerebral hyperæmia. The nuclei lying along the perivascular border, have, in like manner, been the result of increased intervascular pressure, and have reached their present site per diapedism. The hyperæmia formula does not point to any larvated maniacal state existing at the time of death, but to the readiness with which individuals predisposed, as the present patient was, to

cerebral engagements, respond to all febrile affections by a meningeal and spinal blood fluxion.

In Jewell's *Journal of Nervous and Mental Diseases* you will find a short monograph, entitled: "Contribution to the Study of Ossification of the Meninges," in which I described a case where the falx cerebri was ossified. I have made some microscopic specimens of this interesting case, and will show you true bone as the result of this ossification. Calcareous plates situated in the cerebral membranes are frequently found in epileptics and in lepto-meningitis of long standing, as well as in pachymeningitis. True ossification is rather rare, and it usually begins in the inner surface of the cranial bones, and presents itself in the shape of spiculæ of bone. In calcareous plates, bone corpuscles are never found; in spiculæ and bony tumors they are always present. The former owe their origin merely to a deposit of calcareous matter, or salts in exudative inflammatory products. The latter are the result of a true organizing action, through the medium of cells, exactly as in normal bone. Ossification in the membranes of the brain is of very rare occurrence, but calcareous degeneration of their exudative laminæ sometimes takes place, as it is known to occur even in ganglionic cells of the brain.

Erlenmeyer found the commissure of the optic nerves hardened by deposits of calcareous matter in the brain of a monomaniac, who had died with epileptiform convulsions.

Förster, in his atlas of pathological anatomy, describes calcareous cells found in the gray substance of the lumbar enlargement of the spinal cord of a boy whose lower extremities were paralyzed.

Heschl, in Schmidt's *Jahrbücher*, 1863, is the only one, so far as I am able to ascertain, who met with what he calls an ossification of cells in the brain of a patient æt. 22 years, who died melancholic; they were in the compact substance surrounding a small hæmorrhagic cavity in the central part of the right cerebral hemisphere. He used hydrochloric acid to dissolve the granulated contents, and this left the cells with a pale outline in view.

In preparing these spiculæ for microscopic examination, I selected chromic acid (0.1 to 25.0 of water), in preference to

using hydrochloric (dilute) acid. The decalcification takes place rather slowly, according to the strength of the solution, and this should be changed every few days, as the acid dissolves the lime more readily when this is frequently renewed. On microscopic examination these spiculæ were found to be true bone. Some sections of the ossified portion were placed in acid (chromic) for a few days; sections were then made, and stained with carmine in glycerine. They were then mounted in glycerine (Price's English) and submitted to an examination, which revealed the presence of the laminæ, Haversian canals and lacunæ of true bone.

Beginning, as these growths do, from that membrane which acts the part of a periosteum for the internal surface of the cranium, we are inclined to attribute the production of genuine bony plates in the dura (as well as in the falciform processes) to a relapse in the direction of its previous formative activity in infantile life.

The rapid advance in science, to which much is due in the revelations of the microscope, will I trust continue, and at no distant day receive such encouragement from all members of society that the microscope will be found in every household, and thus make a microscopist in every family.

ARTICLE III.

STUDIES IN RELATION TO THE PRODUCTION OF PAIN BY WEATHER. By J. T. EVERETT, A.M., M.D., Sterling, Ills.

It has long been a popular belief that parts which are the seat of old traumatisms, chronic rheumatism and old tissue deposits become the seat of pain upon the approach of storms. This no one has attempted to explain. Until quite recently I have seen no other consideration of the subject in our literature than an admission of the general fact, without suggestion as to its cause and character.

As I had been in early life the subject of coxalgia, and since

then have been a periodical sufferer from the same trouble, I commenced, in the spring of 1866, a series of observations, with a view to solving the problem, if possible.

Careful observations, extending over this period of 12½ years, have established, in my mind, the main fact, but have failed to give me an explanation of the phenomena here considered.

In July, 1878, I addressed the following circular to two hundred and fifty of the most prominent medical men in this country and Europe:

STERLING, ILLS., July 1, 1878.

DEAR DOCTOR: Will you have the kindness to fill out this blank, and oblige,

Yours resp'y, J. T. EVERETT.

Etiology of Chronic Rheumatism.
Pathology of same.
Atmospheric Influence.
Ozonic Influence.
Electrical Influence.
Influence of Humidity.
Relation of Barometric Pressure.
Relation of Storm Waves.

To this circular the greater number very kindly replied at some length, giving many valuable hints and facts bearing upon the subject.

The majority believed that either electricity or magnetism was the principal factor, but did not know in what manner the cause operated.

A few suggested that ozone might be the primary factor; but they too failed to explain how or why it produced pain. But very few claimed that there was any direct relation between barometric pressure and the physical symptoms; while all admitted the close connection between storm waves and the advent of pain.

Dr. S. Weir Mitchell, in his very able and instructive paper upon "the relation of pain to weather," says:—"the separate factors of storms, such as lessened pressure, rising temperature, greater humidity and winds, appear, as a rule, to be incompetent,

when acting singly, to give rise to attacks of pain. Either, then, it is the combination which works the mischief, or else there is, in times of storms, some as yet unknown agency productive of evil. Such an agent may be either electricity or magnetism."

These statements seem to express the general opinion of the profession at large upon the subject.

Dr. Mitchell found that rheumatic subjects were too sensitive for careful observation. To me, however, they have proved most useful; perhaps because a thirty years experience with this intangible element has made me rather more expert in eliciting the true symptoms of other sufferers, and in rejecting those that are false.

I have observed and tabulated 14 cases of chronic rheumatism, 2 of traumatic neuralgia, 24 of chronic metritis and 12 of malignant anæmia of specific origin.

Many other patients had such negative symptoms as were useless in establishing results; they are here omitted.

It has lately become possible to ascertain the proximity of storm belts through the reports of the U. S. Signal Service office; and the observations made by me prior to the year 1871 are here omitted in consequence of defects due to the absence of these meteorological observations.

Since that year the occurrence of increased pain can be seen to have direct connection with the supervention of either rains, snows or dry storms.

I find that there is a close relation between the occurrence of pain and lessened pressure. The lessened pressure *per se* probably does not cause the pain; rather is it true that a common factor produces both. That humidity is still more closely allied to the occurrence of pain is also true. Yet this alone does not seem sufficient to either produce or relieve the symptom. Humidity, however, in connection with other storm influences, seems to be potent in relieving pain. Does this humidity furnish a better conductor for the passage of the systemic electricity from the body, or does it lessen the amount of magnetic induction? Whether the pain felt depends upon excess or deficiency of magnetism or excess or deficiency of electricity, is a question *sub judice*.

We know that the electric current is at times capable of allaying pain, but why? Temperature has little or no influence, either one way or another.

As to the time of day, there is a preponderance of evidence in favor of a period of greatest suffering between 9 and 11 p.m., and of a period of great but less distress between 8 and 10 a.m. These results differ materially from those obtained by Dr. Mitchell.

The longest interval between the onset of pain and the appearance of the storm, was in my own case, the pain appearing at 11:30 a.m., March 28, and no storm reaching my vicinity until 4:45 p.m., March 30th.

Upon the arrival of either rain, snow or a dry storm, the pain soon subsides.

My observations teach that Dr. Mitchell is correct in assuming that: "the amount of pain bears no relation to the amount of rainfall; neither does the abruptness of the barometric depression, the length, direction or severity of the storm." But that the location in the center or at the edges of the storm belt has a marked effect upon the degree and persistence of the pain, I am fully convinced. The nearer the center of the belt, and the more abrupt the invasion, the more intense is the pain and the shorter the duration; while at the edges of the belt, less fierce is the attack and more slow the retreat.

Thus it would appear that the morbific influence is most intensely active in advance of the storm, for a distance of 200 or 300 miles, according to the rapidity with which the storm center moves. If the velocity be great, the *influence* for pain is proportionately intense; if the storm moves slowly, this *influence* is less distinct and is felt proportionately at an earlier period. Upon the edges of the storm this influence gradually decreases and finally disappears. This influence would thus seem to be governed by the laws which control matter, or the forces which act through matter.

It would seem also to be governed by the laws which control the accumulation of frictional electricity in front of the rubber, the clouds acting the part of this rubber upon the negative earth. Yet this is not a true analogy, since, in the electrical machine,

the rubber must be perfectly dry, with a dry conducting medium, while in the case of the earth the rubber is a mass of aqueous vapor, and the cylinder more or less moist. Then, too, in the terrestrial machine the active agent collects and accumulates in front, while in the artificial apparatus this occurs at the points of the conductor.

The nervous system of the average adult, in its normal condition, is quite uniform in the amount of electricity generated and the amount of heat produced by tissue metamorphosis. In disease, however, the amount of heat generated may vary by 6 or 7 degrees, while the electricity may vary from the normal 9 or 10 times. Any disease which tends to check tissue changes, transpiration, assimilation or to favor tissue deposit, or to retard the play of the vital affinities, predisposes to this condition of the system.

The individual who readily "takes cold" has rheumatic pains. He who works hard and greatly fatigues any particular set of muscles, experiences there the same kind of pain. In chronic inflammation, where deposit has taken place; in the limbs of the inebriate where alcohol has anæsthetised and lessened the tissual change; in cases of pernicious anæmia or blood poisoning from any cause; in the professional man who has fatigued the brain by laborious and exhausting study, thereby retarding nutrition and assimilation; in the nervous woman who has suffered from exhausting influences; in the debauchee, and, in short, in every case where the laws of life are violated, this condition supervenes.

It is a noticeable fact that, aside from storm influences, terrestrial magnetism exerts a wonderful influence upon this class of patients.

In 1867–8 and also in 1872, when the Auroræ were of exceptional brilliancy and frequency, the periods of pain were more frequent, more severe and of longer duration, in proportion to the storm influences.

During the prevalence of the Auroræ, the pain was more intense, and upon their disappearance it also subsided. When the sun spots are more numerous, during an eclipse and also during the conjunction of the heavenly bodies, the pain is more severe, and gradually ceases as these phenomena disappear.

In 14 cases of chronic rheumatism, extending over a period of seven years (a total number of 168 months), the number of false pain indications was 39; while the false barometric indications were nine in a record of 1,935 storms. In two cases of traumatic neuralgia recorded for one year, each over a period of 24 months, the false pain indications were two, with no barometric failures in 300 storms.

In 24 cases of chronic metritis, extending over a period of 258½ months, there occurred 3,090 storms and only 68 false pain and 11 false barometric indications.

In 12 cases of malignant anæmia, extending over a period of 133 months, there were 13 false pain indications and three barometric fallacies in 1,558 storms.

In the following table the first column gives the number of the case; the 2nd, the number of months; and the 3d, the year in which the cases were observed. The 4th gives the number of storms; the 5th, the pain indications; the 6th, the barometric indications of storms; the 7th, the number of rain storms; the 8th; the number of snow storms; the 9th, the number of cloudy days; the 10th, the number of false pains; and the 11th, the number of false barometer indications of storms; while the 12th and 13th give the approximate percentage of errors both of pain and barometer.

In this table I have included under the head of "storms" every slight sprinkling of rain or snowfall or appearance of clouds, as well as the most disastrous floods and tornadoes.

No. of Case.	No. of Months.	Year.	No. of Storms.	No. of Pain Indications.	No. of Barometric Indications.	No. of Rains.	No. of Snows.	No. of Cloudy.	False Pain Indications.	False Barometric Indications.	Per cent. of False Pain Indications.	Per cent. of False Barometric Indications.
R 1	12	1870–1	140	149	144	56	21	63	9	4	.060	.030
R 2	12	1872–3	128	128	127	52	31	45	0	1	.000	.000
R 3	12	1872–3	128	130	127	52	31	45	2	1	.014	.007
M 17	12	1872–3	128	127	127	52	31	45	1	1	.007	.007
M 18	12	1872–3	128	130	127	52	31	45	2	1	.014	.007
M 19	16	1873	60	61	60	31	2	27	1	0	.014	.000
M 15	6	1873	60	60	60	31	2	27	0	0	.000	.000
A 41	12	1873–4	138	140	138	101	21	16	2	0	.014	.000
A 42	12	1873–4	138	137	138	101	21	16	1	0	.007	.000
A 43	12	1873–4	138	141	138	101	21	16	3	0	.022	.000
R 4	12	1873–4	138	138	138	101	21	16	0	0	.000	.000
R 5	12	1873–4	138	140	138	101	21	16	2	0	.014	.000
M 26	12	1873–4	138	140	138	101	21	16	2	0	.014	.000
M 27	12	1873–4	138	142	138	101	21	16	4	0	.028	.000
R 6	12	1874–5	141	141	142	88	23	30	0	1	.006	.007
R 7	12	1874–5	141	139	142	88	23	30	2	1	.014	.007
R 8	12	1874–5	141	150	142	88	23	30	9	1	.063	.007
M 20	12	1874–5	141	151	142	88	23	30	10	1	.065	.007
M 21	12	1874–5	141	128	142	88	23	30	13	1	.092	.007
M 22	12	1874–5	141	150	142	88	23	30	9	1	.063	.007
M 23	12	1875–6	152	149	151	79	30	48	3	1	.022	.007
M 24	12	1875–6	152	149	151	79	30	43	3	1	.022	.007
M 25	12	1875–6	152	139	151	79	30	43	13	1	.092	.007
M 28	12	1875–6	152	150	151	79	30	43	2	1	.014	.007
M 29	12	1875–6	152	151	151	79	30	43	1	1	.007	.007
A 44	12	1875–6	152	149	151	79	30	43	3	1	.022	.007
A 45	12	1875–6	152	151	151	79	30	43	1	1	.007	.007
A 46	12	1875–6	152	151	151	79	30	43	1	1	.007	.007
R 9	12	1876–7	140	141	140	100	30	10	1	0	.007	.000
R 10	12	1876–7	140	142	140	100	30	10	2	0	.014	.000
R 11	12	1876–7	140	141	140	100	30	10	1	0	.007	.000
R 12	12	1876–7	140	140	140	100	30	10	0	0	.000	.000
R 13	12	1876–7	140	139	140	100	30	10	1	0	.007	.000
R 14	12	1876–7	140	150	140	100	30	10	10	0	.065	.000
M 30	10	1876–7	120	120	120	80	30	10	0	0	.000	.000
M 31	9	1876–7	118	119	118	78	30	10	1	0	.007	.000
M 32	9	1876–7	118	119	118	78	30	10	1	0	.007	.000
M 33	11	1876–7	130	130	130	88	32	10	0	0	.000	.000
M 34	11	1876–7	130	130	130	88	32	10	0	0	.000	.000
M 35	11	1876–7	130	130	130	88	32	10	0	0	.000	.000
M 36	12	1876–7	140	141	140	100	30	10	1	0	.007	.000
M 37	11.5	1877–8	148	147	149	54	21	73	1	1	.007	.007
M 38	12	1877–8	150	150	150	54	23	73	0	0	.000	.000
A 39	12	1877–8	150	150	150	54	23	73	0	0	.000	.000
A 40	12	1877–8	150	150	150	54	23	73	0	0	.000	.000
M 16	6	1878	71	72	73	21	16	34	1	2	.007	.014
A 47	6	1877	79	79	79	33	7	39	0	0	.000	.000
A 48	6	1877	79	79	79	33	7	39	0	0	.000	.000
A 49	7	1877–8	80	80	80	33	8	39	0	0	.000	.000
A 50	12	1877–8	150	149	150	54	23	73	1	0	.007	.000
T N 51	12	1877–8	150	150	150	54	23	73	1	0	.000	.000
T N 52	12	1877–8	150	150	150							

It will be seen from the facts here tabulated—the condensed statistics of many observations—that there is a remarkable correspondence between the prevalence of storms and of pain, thus suggesting that the latter springs directly from some occult storm influence. What is that influence, how does it operate and how can it be neutralized?

It certainly does not depend upon any single factor, unless it be electricity or magnetism. Is it not possible that the conductivity of diseased tissues may become so impaired, and that when storms approach and the air is charged to repletion with the electrical fluid, none escapes from the surface of the body? The systemic electricity might thus accumulate in the economy producing pain in indurated parts, in its attempt to pass off to the earth. Thus upon the occurrence of humidity a ready conductor is found, an equilibrium established and the pain subsides.

If this were true, an electrical current might establish an equilibrium, and thus speedily mitigate the pain. This I have attempted many times with questionable results.

Another indication of the fallacy of such a theory is the known fact that, when we insulate a patient suffering with acute inflammatory rheumatism, the pain ceases within six or eight hours.

It may be that in these patients not enough systemic electricity is generated, and that insulation by retarding conduction permits an accumulation of the electrical fluid. Can it be that the magnetic wave passes into the patient by induction, and that, in its attempt to pass out by conduction, the pain arises as in the first hypothesis?

Is it possible that the electricity preceding the storm converts a portion of the systemic oxygen into ozone, and that, this being an electro-negative oxygen, the absorption of another equivalent of electricity may cause pain in its passage from one tissue to another?

Although the coincidence of ozone and pain must be less frequent than many other single factors of storms, may it not be, that this ozone being a stimulant, increases nerve metamorphosis, and increases the quantity of systemic electricity thus secondarily causing pain.

Which of these theories, if any, may be capable of demonstration, and, in default of all these, what may be the true explanation of the coincidence of pain and storms, is the problem I have endeavored to set forth.

ARTICLE IV.

HAS THE MAMMALIAN BLOOD-CORPUSCLE A NUCLEUS? By WM. T. BELFIELD, M.D., Demonstrator of Physiology, Rush Medical College. Read before the Illinois State Microscopical Society.

The question of the existence of a nucleus in the red blood-corpuscle of mammals has for many years engaged the attention of physiologists. Three considerations suggest such an existence. First, that a nucleus is apparent in all blood-corpuscles not mammalian: second, that nuclei have been recognized in the blood-corpuscles of fœtal mammals; that a nucleus, or the suggestion thereof, can be readily demonstrated in almost all other anatomical elements of mammals. Hence, the deduction has been made that all elements of tissue require nuclei; therefore that the homology of tissues requires that blood corpuscles should also possess them. Prompted by such reasoning, many observers have sought patiently and persistently to demonstrate the existence of these hypothetical bodies, devising new means and methods when old ones had proved ineffectual. Several times success has been claimed, and not a few observers have asserted their ability to demonstrate these nuclei; but, as a recent contributor to this subject has said: "When their methods and work have been published, and others have followed their directions, errors have invariably been pointed out, and the so-called nucleus has been absorbed in 'optical delusions,' and changes brought about by the reagents used." It is somewhat remarkable that the writer of these words, Dr. Stowell, of Ann Arbor, in the same article claims to have demonstrated the nucleus by a new method; or more accurately speaking, claims to have repeated the work of Prof. Boettcher, with confirmatory results. The method is as follows: The corpuscles are bleached by means of a saturated solution of corrosive sublimate in 96 per cent. alcohol. Into 50 parts of this solution one of blood is rapidly diffused. In twenty-four hours the supernatant liquid is poured off and alcohol add-

ed. In twenty-four hours more this is replaced by distilled water. The corpuscles are then subjected to staining agents. By this method Prof. Boettcher claims to have seen nuclei in a small percentage of the corpuscles so treated.

Upon reading these observations it occurred to me that the asserted nucleus might be, in part at least, due to coagulation of albumen and extraction of water (which certainly occurs), whereby a central thickening might readily appear, and hence a difference of refraction and apparent deepening of color be observed.

It seemed that if simple bleaching alone were to be accomplished by the reagents used, the same results should follow bleaching by other methods. I therefore instituted a series of observations, whose results I place before you in this paper and on these slides.

Let me, as preliminary, define the nucleus; for much of the difference of opinion on this question results, it seems to me, from a failure to identify this body. According to Tyson, the nucleus is a mass of bioplasm in the interior of the cell, "more granular, or darker in hue, by transmitted light than the remainder of the cell." * * "This living matter exhibits the important property of being stained by weak solutions of various coloring matters, as carmine, aniline, etc.," * * * "and by these means its demonstration is rendered strikingly easy." If then, after exposure to such a solution, we observe in the interior of a cell a sharply-defined mass exhibiting unmistakable color, the remainder of the cell being colorless, we assert the existence of a nucleus; the absence of such differentiation demonstrating with equal force the absence of a nucleus.

With this idea in view, I procured specimens of fresh blood from man, the dog, rat and turtle; exposed the corpuscles to the action of various bleaching agents—chlorine, sulphurous acid, acetic acid, a freezing temperature; then, when the coloring matter had been removed, immersed them in weak solutions of aniline and carmine, and mounted them in distilled water. I was careful to produce, as nearly as possible, identical effects upon all the specimens, using the same solutions for the same periods upon them all. By each method nuclei were clearly demonstrated in

the turtle's blood, but in no other specimen was there any differentiation of color. It is true that some mammalian corpuscles showed staining, but that staining was invariably uniform from center to periphery, proving conclusively the *absence* of a nucleus so far as carmine staining can prove anything.

These slides have been submitted to the scrutiny of several observers, among them Mr. A. F. Atwood, Drs. H. A. Johnson, Lester Curtis and Chr. Fenger. In every instance the result of the observation was announced before the observer was informed what specimen he was looking at, or why his observation was requested. Thus all possible bias and prejudice were avoided, although the names of these gentlemen are in themselves ample guaranty for the fidelity and accuracy of the observations. Therefore it was with great satisfaction that I heard from each an opinion coincident, in all its essentials, with my own. They observed, as I had in a few mammalian corpuscles, points of different refractive power from the rest of the corpuscle, but never any points of different staining.

The question at once arises—How are we to explain Boettcher's nuclei? It would seem to me that they are due to the action of the reagents employed. Certainly both alcohol and corrosive sublimate coagulate albumen, and alcohol extracts water. That we can secure differences of refraction and even differences in depth of staining by reagents I have proved in this way: Mucus is structureless when taken from the mouth; but when treated with Boettcher's fluid it becomes fibrillated. Now the addition of carmine solution causes an uneven staining, the fibrillæ being especially colored. Surely no one would affirm that these fibrillæ consist of nuclear or germinal matter. Yet just as these fibrillæ differ from mucus as it exists in the mouth, so blood corpuscles, after treatment by Boettcher's method, differ from blood-corpuscles in the vessels. This suspicion that Bœttcher's nuclei are artificial, receives support from recent discoveries as to the structure of nuclei. In the July number of the *Quarterly Journal of Microscopy*, Dr. Klein relates a series of observations, as a result of which he affirms the nucleus to consist of a fibrillar network imbedded in which is a ground substance; that this intra-nuclear network is continuous with a similar intra-cellular net-

work; that nucleoli are merely thickenings and shrivelings of these fibrils. The natural shrivelling effect of alcohol might readily produce a pseudo-nucleus in a blood-corpuscle from condensation of this intra-cellular net work.

Now as to the argument that the homology of tissues demands the existence of a nucleus in the red corpuscle. Does this homology require nuclei in the enamel rods and superficial layers of the epidermis? Certainly they have never been demonstrated. Indeed a nucleus would be in these situations superfluous, for the functions of the nuclei are, as we understand it, growth, nutrition and reproduction. Since neither of these processes is required of enamel or superficial epithelium, nuclei are here unnecessary and therefore absent. Now the function of the mammalian blood corpuscle is only, so far as we know, the transportation of oxygen, a purely chemical process performed as well without as within the body. The hæmato-crystallin, like other ferrous salts, is capable of uniting with oxygen, and again, under other circumstances, of imparting that oxygen. Nutrition, growth and reproduction are, to the best of our knowledge, foreign to the matured corpuscle; hence a nucleus is unnecessary and we would, *a priori*, expect its absence. This proposition is advanced, not as an argument, but simply to show the fallacy of the argument based on homology.

It would be improper to conclude this article without reference to the work of the late Prof. Freer, of this city. By the use of reflected light, Prof. Freer demonstrated in many blood corpuscles a central thickening, but failed to prove any corresponding difference in chemical composition, vitality or function—that is, failed to prove the existence of a nucleus. Hence, while authorities universally admit his demonstration as to contour, they as universally restrict his demonstration to contour. If thickness constitutes a nucleus, then the red corpuscle has a nucleus all around its periphery as well as in its center.

ARTICLE V.

A CASE OF GENERAL MILIARY TUBERCULOSIS INVOLVING THE CHOROID.

By EDWARD L. HOLMES, M. D., Chicago. Read before the West Chicago Medical Society, Jan. 13th, 1879.

Through the kindness of Dr. W. T. Belfield I am permitted this evening to present to you this specimen. It is, I presume, the first specimen seen in the Northwest, which was removed from the cadaver at a post-mortem examination, for the purpose of verifying the clinical fact that the choroid is often implicated in acute miliary tuberculosis.

I believe Dr. C. Fenger, Pathologist of the Cook County Hospital, is the first physician who ever made such an autopsy in this portion of the country.

The literature upon the subject is found principally in foreign medical journals, especially in those devoted to ophthalmology.

In this special case I am informed that the patient, about thirty-five years of age, was brought to the County Hospital almost moribund, with no one to give the previous history. Miliary tubercles were found in nearly every organ of the body.

In this specimen eight minute white elevations are perceived in the posterior half of the choroid. The microscopic appearances are identical with those found in tubercle of other organs and are sufficiently well described in works on pathology.

The principal facts regarding this condition of the choroid are as follows:

1st. So far from being rarely found in the choroid, miliary tubercles find in this membrane quite a "favorite" locality for their development.

2d. They vary in size from one-third of a millimeter to two and one-half millimeters in diameter. As they are usually located in the posterior portion of the choroid, they can be recognized by means of the ophthalmoscope during life. As far as I know, however, the patients have all been on the verge of dissolution when the examinations were made.

3d. In no cases of extensive cheesy masses, confined to the lungs and abdominal organs, are tubercles found in the choroid.

4th. Whenever tubercular deposits are found in the choroid, they are of the miliary form and are present in "almost all the organs of the body," and especially in the meninges.

5th. So far as records state, no subjective symptoms have been observed. The patients have been either too young, or too near death to express complaints regarding disturbed vision. Theoretically elevations in the choroid, crowding upon the retina, especially near the macula, must cause distorted vision.

6th. Cohnheim and Graefe have shown that guinea pigs inoculated with tuberculous substance, died after a few weeks, tubercles being found in the choroid as well as in many other organs.

I may add that Manz and Graefe were perhaps the first who studied this subject. More recently tubercles have been found in the retina, optic nerve, ciliary bodies and iris in individual cases. As early as 1829, V. Ammon and others described as tubercle large masses of "cheesy" substance in the globe, which may have been produced by retrograde degeneration of malignant growths.

IN remembrance of the cordial reception and most generous hospitality he met with in the United States, and to meet the wishes of numerous friends, Dean Stanley has collected into a volume his various addresses and sermons, which Macmillan & Co. will publish in a few days; still further to increase the interest of the volume, the publishers, by the kind permission of the Dean, have been able to add a photograph portrait.

THE very unpleasant, pungent odor of iodoform can be completely masked by oil of peppermint. For instance, iodoform 2.0, vaseline 30.0, rubbed up with six drops of oil of peppermint, make an ointment with a pleasant aromatic scent.

THERE are seventeen teachers of otology at fourteen universities of the German empire, while at six universities otology has found no representation yet in the medical faculties.

Clinical Reports.

ARTICLE VI.

CHICAGO HOSPITAL FOR WOMEN AND CHILDREN.

(Reported by MARY H. THOMPSON, M.D.)

Two Cases of Placenta Prævia.

Case No. 1. Miss E. B., American, single, primipara, was brought to the hospital about noon, Sept. 10, 1878. She was in the first stage of labor, and having considerable hæmorrhage.

She said she had flowed all the morning, and that she had felt no movements during the two weeks previous to her entrance since she was injured by a kick upon the abdomen. She thought herself only in the eighth month of pregnancy.

Upon examination by the resident physician, the os uteri was found dilated about one and a half inches in diameter at the time of a pain, and occluded by a spongy mass, with what was thought to be the fœtal head behind it. She was ordered an enema, and when at stool one-half pint of clots was passed from the vagina in addition to the continuous flow. This was followed by a chill and the cessation of the hæmorrhage for an hour, when another half pint of clots was lost.

At four o'clock p. m., I was summoned and found the patient pale and the lips blanched to near the color of the face. The os uteri was about one-fourth dilated, and closed by the placenta, which was so thin upon one side that I was sure it was the circumference and that we had a case of partial placenta prævia. Through the placenta I felt the fœtal head. The flow was continuous, but more profuse between the pains.

The rule by which to be guided in the present case seemed to

be to dilate the os uteri as soon as possible, without detriment to the uterus or neighboring tissues, and to remove the fœtus. The question was, how shall it be done?

I believe the greater part of the hæmorrhage in placenta prævia comes from the uterine vessel, and that it is this portion of the hæmorrhage which imperils the woman's life rather than that from the placental vessels. There are always doubts in regard to our power of saving the life of the child, especially if hæmorrhage has existed at different periods during the last months of pregnacy. But if we save the child's life it is by saving the mother's, and terminating labor in the expeditious way consistent with this physiological process of child-birth. Hence, I determined to compress the uterine vessels in the lower zone of the organ, and if possible those of the placenta.

I inserted the tips of three fingers, in the form of a cone, into the os uteri, and spread them, detaching the placenta as far as it could be reached entirely around the margin. The circumference of the placenta being easily reached on one side, was torn and pushed back. The fingers were quickly removed, and pressure from the vaginal surface applied with the hand until after the first contraction. The fingers were again inserted and spread so at to keep the os distended or stretched out, with all the power that could be applied in such a position; but when contractions came on, the fingers were removed and rested during the time, and immediately reinserted.

The blood vessels were thus effectually closed for the time; and soon the labor pains, which were at first weak, became stronger.

To be positive that by this maneuver we were arresting the hæmorrhage, the fingers were removed twice during the periods between "pains," when the hæmorrhage began as at first.

About 5:15 p. m., the first stage terminated, and fluid extract of ergot was given in two gram doses until three doses were given. The pains were stronger for a short time, then grew so weak that the labor was terminated with forceps.

The child had been dead for some time. The cuticle was denuded in some places, and in others it hung in folds, having partially lost its connection with the body.

The mother made a slow but sure recovery.

Case No. 2. Mrs. L. H., aged 40, American, mother of four children, entered the hospital Sept. 18th, 1878. She had slight hæmorrhage and said she was near her "term;" also that she had never bled before when carrying her children. She had flowed four months previous to her entrance and at every succeeding period, also whenever she worked (as she at times was obliged to). The last time was five days ago, after ironing a little, but it ceased after lying down. On the second day after admission, and after walking about the ward, hæmorrhage came on and lasted three hours, ceasing as suddenly as it began. On the 22d, or fourth day after entrance, about four o'clock a. m., slight labor pains began and continued until eleven a. m., with only a little show, but at this time hard pains and hæmorrhage commenced.

I found no dilatation and the cervix nearly an inch thick. Had it been thinned we should have used the fingers as in the other case. Instead, we used the tampon and asked advice of Drs. E. Marguerat and J. Bartlett. They advised the use of the tampon until dilatation was effected. We made the tampon of an ordinary roll of bandage, unwinding a part, then inserting the whole, adding cotton until the vagina was full. But I soon found dilatation of the vagina going on, and hæmorrhage beginning again, unless the whole mass of cotton was pressed against the os uteri. This act not only seemed to control the bleeding, but stimulated contractions.

About half past two o'clock p. m., the tampon was removed and the colpeurynter used instead, but for a short time, however, as it was expelled after being distended to its extreme limit. The tampon was again used after an examination, which confirmed the diagnosis of central placenta prævia, for the os uteri was not only occluded by this thick, spongy body, but a portion protruded into the cervix.

At about four o'clock p. m., Dr. Marguerat returned, when I removed the tampon and by examination found the os sufficiently dilated to admit my hand. Dr. M. advised turning at once. I pushed my hand through the os uteri and placenta and brought down the feet, but then discovered that I had a full-termed fœtus to remove through the small opening in the placenta, and the insufficiently dilated os uteri. I drew down the feet, and continued

making traction, hoping the body of the child would enlarge the opening in the placenta, and that in the meantime the cervix would dilate.

The opening in the placenta was made larger, for it was torn into the membranes on one side, and the os was dilated (not lacerated), but the child gave not the least sign of respiration, though the heart beat in a fluttering way for nearly an hour.

In this case, as in the first, the mother made a good but slow recovery after the great loss of blood.

I believe that had we waited until sufficient dilatation had occurred, the child's life as well as that of the mother's might have been saved. In fact, I think too frequently the child is sacrificed, and sometimes the mother, by an undue haste to terminate labor, and that if life is not lost, the mother is injured beyond the power of surgical skill to mend.

ARTICLE VII.

COOK COUNTY HOSPITAL.

(Reported by J. H. SALISBURY, M.D.)

A Case of Cancer of the Rectum, in which Colotomy was performed for the Relief of Intestinal Accumulation.

Sailor, age 35, native of England. Admitted to Cook County Hospital, July 9, 1878.

On admission he gave the following history: About two years ago he noticed that he passed blood with his stools. He went to the Buffalo hospital, and was treated for chronic diarrhœa. He left the hospital after five months, somewhat improved, but the discharge of blood and mucus still continued. From this time until October, 1877, he followed the occupation of a sailor. He was troubled during this time with discharges of blood and slime, and occasionally he had some pain in the bowels. Otherwise he was well. In October, 1877, he entered the Marine hospital, in this city (Chicago). His disease was here diagnosticated cancer of the rectum. He left the hospital after four months, without

much improvement. Since that time he has kept himself very quiet, and his symptoms have been somewhat better. He has treated himself with carbolic acid and glycerine locally, as an injection.

For the last week previous to admission, he has had more pain in the abdomen than usual and has lost his appetite. His abdomen has swollen considerably, and he has been troubled as formerly with frequent passages of slime and blood. He states that he has lost in the last two years about fifty pounds in weight. His weight is now about 140, and varies between 140 and 160.

On examination the rectum was found almost obliterated by the projection into it of a hard enlargement of its walls. The caliber of the rectum was so small that not even a catheter could be introduced. The patient was suffering great distress from the distension of the abdomen, having had no passage for nine days. He could eat nothing.

On July 15th, Dr. Gunn performed colotomy, making an inincision through the integument about five inches in length, running from a point two inches above the anterior third of the iliac crest obliquely upward and backward. After dividing a few fibers of the latissimus dorsi, the operator found, between that muscle and the peritoneum, just at the edge of the quadratus lumborum, a quantity of loose fat, by the removal of which the colon was exposed. Two ligatures were passed through the bowel, which was divided between them. The edges of the wound were then stitched to the edges of the external incision. Considerable soft fecal matter and gas escaped, and the patient expressed himself much relieved. He recovered readily from the operation. The bowels discharged their contents through the artificial opening usually regularly; occasionally a cathartic was required.

About the middle of August the patient began to complain of great pain in the rectum, and to pass blood and slime again. Aug. 26th, a note is made that he passed blood and strands of dead tissue. Oct. 18th. Has difficulty in urinating, passing only a small stream and with pain. The pain continued to increase, and became so severe that for about three weeks before death he received daily four hypodermic injections of morphia, of $\frac{1}{2}$ grain each. Nov. 2d, he had a chill. For about two weeks before death he had œdema of the left leg. Nov. 11th. After three

copious discharges of blood per rectum, the patient expired from the exhaustion of the hæmorrhage.

Autopsy 12 hours after death. Very little fluid in the serous cavities. Heart normal but very anæmic; lungs normal and anæmic; one of them a little œdematous. Lower two-thirds of the peritoneal cavity filled with the enormously distended sigmoid flexure of the large intestine. The whole peritoneal surface, both visceral and parietal, is covered with thousands of fine, white, cancerous nodules, varying from the size of a mere dot to that of a small pea. In the parietal layer of the peritoneum, in the right iliac fossa, is a patch of diffuse, confluent, small white masses.

The finger passes from the artificial opening readily upward, into the descending colon, but not downward into the part below. The gases and other contents in the distended part below do not escape at this point when pressure is made on the gut. The artificial anus is found to open into the colon at the portion not covered by the peritoneum, leaving this membrane untouched. Extensive adhesions between the distended bladder and sigmoid flexure from continuous cancerous growths. The ureters very much distended, especially the right. The pelves of both kidneys likewise distended; kidneys much enlarged from hydro-nephrosis, pale and light-colored patches are found in their tissue which look like cancerous infiltration. The left common iliac vein is obliterated from a point an inch above Poupart's ligament to within an inch of its junction with the other, by cancerous growths from adjacent portions of the parietal peritoneum. The lower part of the pelvic cavity is filled with a general, diffuse, cancerous growth, involving all the viscera and the cellular tissue, forming a firm mass, which has broken down in one place and formed a cavity of the size of two hen's eggs. In the wall of the cavity may be found the opening of one of the branches of the internal iliac artery, from which the hæmorrhage proceeded. The bladder distended, walls hypertrophied, openings of the ureters closed by cancerous infiltration, the prostate enlarged from a similar growth. The liver, spleen and brain were very anæmic, but otherwise normal.

ARTICLE VIII.

MERCY HOSPITAL.

(Reported by F. E. WAXHAM, M.D.)

Case I.—*Retro-Œsophageal Abscess.*

Mary B., æt. 27, entered the hospital June 11th, 1878. She complained of a very severe cough, which seemed to be paroxysmal in character, and had existed only for a few days. These paroxysms were very distressing, and seemed to be aggravated by exercise. Anti-spasmodics were given, but without affording relief. In a few days there began to be obstruction to the passage of food into the stomach. Pain became excessive. The patient said she felt as if there was a large swelling in the œsophagus. In a short time she began to vomit, and everything taken into the stomach was rejected. She refused to take enemas, and became greatly exhausted. Her pulse fell to 44 per minute, and it was thought that she could hardly live from one day to another. It was supposed that she was suffering from cancer at the cardiac extremity of the stomach, and she was placed upon appropriate treatment.

July 11th. Vomited about a pint of sanguineo-purulent matter. She also had several purulent discharges from the bowels. July 12th. Very much better; vomiting had entirely ceased. Her appetite returned, and food retained. July 20th. Discharged cured.

Case II.—*Laryngitis with Œdema of Glottis.*

Frederick Hager, æt. 43, entered the hospital July 8th, suffering from simple laryngitis with œdema. Breathing extremely difficult and irregular. He was obliged at times to stand, place his hands to his sides, and struggle for breath. Voice hoarse and jerky; some cough. The inspiration required much more effort than the expiration. The disease commenced four days before entering, but was quite mild until the day previous, when he suffered greatly from dispnœa. His attending

physician stated that he received during the day 0.48 grams of croton oil without effect. He also received a topical application of a strong solution of nitrate of silver, which increased the difficulty of respiration, threatening suffocation.

Upon entering the hospital a mustard plaster was applied to the chest, and a solution of persulphate of iron, 4 grams to water 64 grams, applied to the larynx and glottis by means of a sponge attached to a staff. This greatly increased the dispnœa for the time, but was frequently repeated, and seemed to afford relief. All preparations were made for performing tracheotomy, and the patient closely watched during the night.

July 9th. Considerably better; still continued the application of the persulphate of iron every two or three hours. July 12th. Considered out of danger. July 13th. Greatly improved. July 15th. Left the hospital cured.

Case III.—*Psoriasis Diffusa.*

Dennis Donahue, æt. 50, laborer. The patient entered the hospital October 9th, with general inflammation of the skin, with profuse desquamation, the cuticle coming off in the form of pearly white scales from head to foot, and leaving the cutis very red. Bowels generally regular; appetite good. General health fair. Temperature normal. Pulse 108. Last spring the patient was attacked with lichen tropicus, extending over the entire body. Following this was an attack of chills and fever. The entire skin became dark in color, and the epidermis came off in large patches. The skin then became almost natural, scaling only on portions of the body. About a month previous to entering the hospital, the disease rapidly spread over the entire body, and since then complete desquamation has been taking place. Patient complained of a constant itching, and was continually rubbing off the scales. These were rapidly reproduced; one pint of these scales were collected during a period of twelve hours.

Treatment—He was directed to take Fowler's solution, 0.48, after meals, and to anoint his body thoroughly at night with oleum ricini. Oct. 12th. As he did not sleep well, he was directed to take 0.6 chloral hydrate, with 1.2 potassic bromide at night.

October 25:

℞ Olei Morrhuæ 200
Hypophos. sodæ 10
Hypophos. calcis..... 10
Aquæ calcis..... 200
Gummi acaciæ. q. s.....

M. et sig. Tablespoonful after meals.

For local application, he received a lotion of acetate of lead one gram, and borax two grams, in 100 grams of water.

Nov. 2d. Face begins to look quite natural, also his breast and arms, but his hands and feet show but little improvement.

Nov. 4th. The patient left the hospital, much improved.

NOTES FROM PRIVATE PRACTICE.

ARTICLE IX.

An Interesting Case of Placenta Prævia.

I was called on the eleventh of November at half-past seven in the evening to see Mrs. P——, a lady twenty-two years of age, who had been in labor for twenty-four hours, under the care of a midwife.

I found the patient much exhausted from hæmorrhage. Upon examination I found a large quantity of blood in the bed, and presenting at the os an arm, a shoulder and a portion of the placenta. The remaining portion of the placenta was attached to the left side of the uterus.

I introduced my hand and completely detached the placenta, then bringing down the foot completed the labor in about five minutes, delivering the woman of a healthy child.

The detachment of the placenta checked all hæmorrhage, and by rapid delivery the child was saved. The mother made a good recovery.

DAVID DODGE, M. D.
152 WEST TWELFTH STREET, CHICAGO.

Society Reports.

ARTICLE X.

CHICAGO MEDICAL SOCIETY.

Meeting Feb. 3d, 1879, Dr. Hamill in the chair.

DR. F. C. HOTZ read an essay entitled: "Observations on Defects of Sight, induced by Exposure to Excessive Heat." In the latter part of last year a number of persons came under his care with defects of sight, which they noticed sooner or later after the very hot days in July. Two of these patients were not exposed to the direct rays of the sun, but were prostrated by the heat while working in hot rooms. The other patients were overpowered by insolation. They became dizzy, fainted and some were unconscious for several hours. The direct effect of the heat was a violent headache, lasting from several days to several weeks. During this period of headache the patients (except two) did not observe any visual disturbances; but after the headache ceased, vision became more or less indistinct. The ophthalmoscope revealed marked changes in the fundus oculi, viz.: in five cases neuro-retinitis, in one case choroiditis, with subsequent detachment of the retina. A careful analysis of his observations lead the reader to the view that the immediate effect of the excessive heat in these cases, was a hyperæmia of the meninges, in some cases bordering on inflammation; this hyperæmic or irritative state was propagated through the sheaths of the optic nerve to the eyeball, where it induced the neuro-retinitis or choroiditis. In support of this view the essayist adduced Schwalbe's anatomical investigations into the connection of the lymph spaces of the optic nerve with the sub-arachnoidal space; and analogous clinical observations which proved the fact that an inflammatory process of

the meninges has been directly propagated to the eyeballs by the described route.

It was also stated that even the latest text-books on diseases of the eye do not speak of sunstroke as an indirect cause of visual disturbances.

In the discussion which followed, Dr. Montgomery said that, like the reader, he could not but be surprised at the almost entire lack of any literature on the subject. He reported a case of hyperæmia of the fundus oculi coming on suddenly after exposure to heat. He mentioned also two cases of retinitis due to observing the eclipse of last summer without the protection to the eyes of smoked glasses.

DR. INGALS read a paper comprising a series of questions suggested by Dr. Sawyer's case of partial inversion of the uterus, reported in our January number. These were made the special topic of discussion for the next meeting.

DR. STARKWEATHER gave an un-official account of the work done by the State Board of Health. He stated the entire number of certificates issued to graduates and midwives as 4,171, while to those exempted under the ten-year clause, 942 certificates had been issued. He also gave an account of the efforts now making to repeal the laws creating a Board of Health and regulating medical practice, and thus open the field to every irregularity, as formerly.

ARTICLE XI.

THE WEST CHICAGO MEDICAL SOCIETY held its regular meeting at the Washingtonian Home, Feb. 10th, Dr. Bridge in the chair.

Dr. E. W. Lee related a case of fracture of the neck of the femur, in a boy ten years old. After sustaining the injury the lad walked home, a distance of several blocks; indeed, he was able to walk for two days afterwards, not being compelled to keep his bed until the third day after the injury. There was no suspicion of fracture until the third week, at which time Dr. Lee

was called in, and discovered an extra-capsular fracture. In response to a question, the doctor stated as his explanation of the case, the presumption that there had been impaction of the shaft which persisted for the time during which the boy used the limb.

In the discussion which followed, Dr. A. H. Tagert mentioned a similar case. A man about 50 years of age was pushed from the platform of a street car, falling in the stony street upon his hip. He arose and walked home, a distance of ten blocks. He was subsequently found to have sustained a fracture of the neck of the femur, the limb being 2 inches shorter than its fellow.

Dr. Bridge exhibited Bartlett's forceps, for application at the superior strait. Several advantages were pointed out, among them the fact that the axis of traction could be easily made parallel to the axis of the superior strait. The instrument was the object of considerable criticism, both favorable and adverse.

Dr. Lee exhibited a splint for fracture of the femur, in which counter-extension was secured by taking advantage of the conical shape of the thigh. No perineal band is needed. The advantages claimed are mobility of the limb, simplicity of dressing, security of the extension. While originally designed for children, it had been used, to the doctor's entire satisfaction, on adults.

ARTICLE XII.

MICHIGAN STATE BOARD OF HEALTH.

The regular quarterly meeting of the State Board of Health was held in Lansing, on Tuesday, Jan. 14, this being its first meeting in its rooms in the new capitol building. The following members were present: R. C. Kedzie, M.D., President; H. O. Hitchcock, M.D., Hon. LeRoy Parker, Rev. D. C. Jacokes, and Henry B. Baker, Secretary.

ADULTERATION OF SUGARS, SYRUPS AND HONEY.

As committee on foods, drinks and water supply, Dr. Kedzie made a verbal report on table sweets, showing the methods of adulteration now practiced. One of these is by the

use of glucose, which is an inferior article of sugar, formed by the action of sulphuric acid on starch. In sugars thus adulterated, there is usually found sulphuric acid and copperas. Another method lately practiced has been for the lessening of duties, and consists in coloring sugar, so as to make it appear of lower grade. The danger comes from the poisonous chemicals used in bleaching. Dr. Kedzie also mentioned the fact that where bees are fed on glucose, this substance will be deposited in the cells without change. In connection with the adulteration of sugar, the doctor also said that one bushel of corn would make about 40 pounds of grape-sugar or glucose. Where the sugar is of a blue tinge, it is an evidence that blueing has been added to the sugar to relieve the yellow appearance due to the adulteration. The experiments and reports heretofore made by Dr. Kedzie had been made the basis of a memorial to congress, asking legislation upon the subject.

VENTILATION OF BUILDINGS ALREADY CONSTRUCTED.

The committee on the subject of ventilation and heating of buildings, Rev. Dr. Jacokes, read a paper on the heating and ventilation of buildings already constructed. He first showed the importance of good ventilation, and then pointed out many ways in which buildings already constructed, faulty in this particular, could be improved. One method was the leading of fresh air from outdoors to a jacket enclosing a space around a stove, and withdrawing the foul air from the floor level by means of pipes which lead from near the floor to the chimney above. He showed many diagrams illustrating the methods of improving the ventilation in buildings already constructed. He gave one illustration of a church which had been insufficiently warmed by three stoves, but which was afterwards thoroughly warmed and ventilated by one of these stoves, properly jacketed, and the cold and foul air withdrawn from the floor level. The ventilation of two churches by a similar method cost but $10, and ventilating apparatus for dwellings cost from $1.25 to $10.

ILLUMINATING OILS.

As committee on special sources of danger to life and health, Dr. Kedzie made a verbal report on illuminating oils. In this report he brought before the Board a sample of "mineral seal" oil, a new brand, which stands a flash test of 260 degrees, by the Michigan method, and will also stand the Michigan chill test. He exhibited a lamp filled with this oil, which gave a brilliant light equal to twenty-six railroad candles. This oil is manufactured for the Standard Oil Co., in Cleveland. It sells for forty cents a gallon. It is made by freezing the paraffine out of heavy paraffine oil. He recommended the use of this oil on railroad cars under very stringent provisions. He showed the safety of the oil by heating it to 254 degrees and plunging lighted pine sticks into it, when they were immediately extinguished.

He also brought up for discussion the question as to what action the Board shall take with reference to illuminating oil for ordinary purposes. As showing the ways in which certain parties seek to evade our laws, he exhibited a specimen of oil and the dealers' circular in connection with it, claiming a new and safe illuminator called "potalene." It was on exhibition at the State Fair, pleading for a premium. He put fifteen drops in a heavy glass bottle and touched a lighted match to the mouth of the bottle, when the flames and smoke shot several feet high. He said this oil was simply naphtha in which potatoes had been soaked.

It was voted that the interests of life in this State will be subserved by maintaining the present tests for illuminating oils. Dr. Kedzie was requested to make a thorough investigation of the whole subject, and to act for the Board in endeavoring to maintain the present tests.

REGULATION OF MEDICAL PRACTICE.

LeRoy Parker, committee on legislation in the interests of public health, read a report on the subject of the Illinois law regulating medical practice, and on the proposal to regulate the practice in Michigan. The Illinois law compels an examination by a State Board, and the effect is to drive quack doctors out of the

State, and some have come to Michigan. He recommended the enactment of a law by the Michigan Legislature, requiring practitioners to undergo examination.

Dr. Hitchcock presented the form of a memorial to the Legislature on the same subject, expressing the opinion that great injury is being done to the health of many persons in this State, and that many deaths occur because of treatment by ignorant and unscrupulous pretenders, bearing the name of doctor, with perhaps the title of "M. D." He recommended an examination of practitioners in anatomy, physiology and pathology of the human body, and in chemistry and botany.

The memorial was adopted.

SANITARY TOPOGRAPHY.

LeRoy Parker made a verbal report on a memorial to the legislature on the subject of topographical survey of the whole State for sanitary purposes. Dr. Baker was added to the committee and it was recommended that the survey should not only be topographical, but should embrace all sanitary subjects, especially those relating to water, as, for instance, drainage, pollution of streams, water-supply, etc.

SANITARY CONVENTION.

Dr. Baker, who was a committee to prepare for a sanitary convention at Coldwater, reported that owing to the death of Dr. J. H. Beech of that city, the local support to the movement was withdrawn, and it was impossible to hold the convention. Much work has been done in preparing for this meeting, and he had endeavored to secure such a meeting at some other place. A communication was received from Dr. J. H. Kellogg, of Battle Creek, inviting the Board to hold a meeting at that place, pledging the support of the citizens of that city to make the meeting a success. The subject was postponed to the April meeting.

A committee was appointed to draft resolutions relative to the death of Dr. Beech, and its chairman, Dr. Hitchcock, presented the following preamble and resolution which was adopted by the Board.

"WHEREAS, We have heard with deep regret of the death of Dr. J. H. Beech, of Coldwater; therefore,

"*Resolved*, that in the death of Dr. Beech this Board has lost one of its most interested and efficient correspondents, and the people of the State have lost one of their most intelligent, earnest and practical sanitarians."

DIPHTHERIA STATISTICS.

The Secretary presented reports from Dr. E. N. Palmer, of Brooklyn, Jackson County, relative to the outbreak of diphtheria in that section. During a period of five months, there were sixty-seven cases and eleven deaths. He gave several instances where diphtheria had been communicated by persons convalescent from that disease; also, by persons who did not have the disease at all, but were in attendance on patients.

The document on the prevention and restriction of diphtheria, issued by this Board, has been in great demand, not only in Michigan, but throughout other States and Territories.

DRAINS AND SEWERS.

Dr. Baker presented a communication from A. C. Sekell, City Surveyor of Grand Rapids, transmitting rules and regulations of the Board of Public Works, in that city, with reference to house-drains and sewers, and moved for the preparation of a circular asking the facts concerning the regulation of drains and sewers in the cities of Michigan, and also the views of sanitary experts and engineers, with a view to making some general recommendations for the benefit of the many small cities and villages now just beginning to consider the subjects of drains and sewers.

By request of members of the Board of Control of the State public school, Dr. Baker presented the subject of the temporary maintenance of diseased and crippled children at the State Hospital in Ann Arbor, as a means of preventing sickness and pauperism in after life.

After the auditing of bills incurred during the past quarter, and the transaction of other necessary business, the Board adjourned to the annual meeting, April 8, 1879.

Foreign Correspondence.

ARTICLE XIII.

CLINICAL NOTES FROM LA CHARITÉ, OF PARIS.

The two most popular teachers of clinical medicine in Paris are Prof. Germain Sée, of the Hôtel-Dieu, and Prof. Hardy, of La Charité. The wards and lecture rooms of both these men are always crowded. The former is perhaps more widely known as a writer and lecturer than the latter, but among the students and members of the profession generally in Paris, Prof. Hardy is looked upon as the more reliable teacher of the two. While Prof. Sée is ever launching out into some new field in pathology and therapeutics, Prof. Hardy is more inclined to teach thoroughly such facts in medicine as are well settled and beyond controversy.

Enquiring of a French professor in another department of medicine as to which of these men would prove most beneficial as an instructor, he said, "Prof. Sée is a man who has always a hobby, and consequently his teachings are not always reliable. On the other hand, Prof. Hardy is ever trustworthy, and his observations can be more implicitly relied on." As the readers of the JOURNAL will probably remember, in 1877 I gave Prof. Sée as authority for some glowing statistical results of the treatment of rheumatism with the salicylate of soda. Since that time I have taken some pains to compare these with those obtained in the other hospitals of Europe that I have visited, and while such results are not generally so good as those given by him, I think it can be safely said that we have in this remedy an agent far superior to anything before known to the profession as an anti-rheumatic.

Among the new ideas that Prof. Sée enthusiastically enun-

ciated during the first part of his lecture course last fall, was the curability of certain forms of cirrhosis of the liver by the administration of large doses of the iodide of potassium, and the successful treatment of morbus Basedowi by the continued use of the tincture of veratrum viride.

Prof. Hardy, in his introductory address to his class, laid great stress upon the importance to every student of medicine of his being well grounded in two subjects: *pathology* and *diagnosis*. These two branches of medical science, he said, were the compass and the rudder that would guide to the desired haven in our profession. Without them, one will find himself adrift upon an unknown sea, beat about by every changing wind. While the way to study pathology was clear and apparent to all, and men would generally pursue it with tolerable diligence, he found considerable difficulty often in making good diagnosticians of his students.

The first cause of this failure was that many could not be made to comprehend the importance of the subject. But the second and most general reason for failure was that they early imbibed a notion that they were possessed of a certain intuitive instinct that enabled them to diagnosticate a case after the most superficial and cursory examination. "I have seen," he says, "all through life, men old and young who claimed to be endowed with such an intuition; but I can assure you that it was always a mistaken idea. Every now and then these men make some woeful blunder, that blasts their own fame and brings disgrace upon our profession. That man will ever make the best diagnostician who studies his subject most thoroughly and thinkingly, and observes with the most scrutinizing eye every morbid phenomenon in the case that he is called to investigate."

SCARLATINA.

An adult female patient, aged 37 years, was admitted to La Charité, Nov. 20th, 1878, suffering from a tolerably severe attack of scarlet fever.

Prof. Hardy, in lecturing at the bedside of the patient, made in substance the following remarks worthy of note:

"Of the exanthemata, this disease is least likely to recur

a second time. Treatment should be expectant or symptomatic. In all mild cases we have absolutely *nothing* to do. It is only when we have the supervention of some complication that we are called on to interfere. Among the complications that may arise in the course of every case, and especially every severe one, and which will call for our active interference, is that of an extremely high temperature. During my professional life I have watched many cases anxiously, and all went well until suddenly a temperature of 40.5 or 41 was attained.

"If I happened to see the patient only a short time after the supervention of such hyper-pyrexia, there would be perhaps nothing else about the case to excite apprehension or alarm. I would leave the house in the evening with a promise to call the next morning, but within the next few hours, say from six to ten after my departure, I would be summoned again, to find my patient either wild and delirious or in a condition approaching that of coma.

"After this state of things supervened, I had not seen for years a single case recover, until I adopted the course of treatment which I shall presently recommend. It was formerly thought that these nervous manifestations, and especially that of stupor, were caused by uræmic poisoning.

"But later investigations have proven that this is not the case. They have demonstrated that all kidney complications belong to the later or desquamative stage of the disease.

"These symptoms, denoting a fatal implication of the nervous centers, are produced by extreme heat of the body, and to the combating of this condition we must direct our treatment.

"What are we to do? Give medicines? I can assure you that we have no remedy in the materia medica that will exert the least influence in preventing a fatal termination in such a case as this. There is one thing, and one only, that you can do with a hope of saving life, and that is, immerse the patient at once in a cold bath of from 18° to 20°, and repeat this bath sufficiently often to bring the temperature down. If you do this early, and do it thoroughly, you may be successful. If you vacillate, your patient will assuredly die.

"Great care should be taken in the after management of

scarlatina in cases of adults, for while they generally have the disease in a much milder form than do children, and are less likely to die in the acute stage of the disease, they are much more likely to have nephritis as a sequel, and such a complication with them is much less amenable to treatment than among patients during the first years of life.

"My rule is to confine children to the house for one month after an attack of scarlet fever, and if adults follow my advice, they will not expose themselves to any vicissitudes of temperature for at least two months after apparent recovery from this disease."

TYPHOID FEVER.

On November 21st, 1878, Prof. Hardy lectured on the following case:

Jean Drowin, aged 17 years, was admitted to the wards of La Charité Nov. 14th. When questioned as to his symptoms, he simply complained of a general feeling of malaise; he suffered no pain, and nothing of a morbid character could be discovered by the most careful physical examination. He had no diarrhœa nor tympanites, but had some appetite.

"When this patient came under observation, we had to hold our diagnosis in reserve. In fact, we were unable to tell with what disease we had to deal. His temperature for the first five days following his admittance I have had written out on that large card placed upon the wall, so that all may see it at a glance."

It was as follows:

Nov. 14th,	morning,	37.4;	evening,	38.2.
" 15th,	"	37.6	"	38.7.
" 16th,	"	38.	"	39.
" 17th,	"	38.4	"	39.9.
" 18th,	"	38.7	"	40.
" 19th,	"	38.8	"	40.1.

"This temperature curve, gentlemen, corresponds to but one disease, and that is typhoid fever. To further verify our diagnosis, I will heat a small portion of the patient's urine, which you see contains a trace of albumen.

"Another point that would assist us if we were still in doubt

as to the nature of the disease with which we have to deal, is the fact that this lad had been only six months in Paris, and according to my observation, persons of this age who come to this city from the provinces and inhabit the quarter in which he lives, are very likely to have an attack of typhoid fever as a kind of acclimating process.

TREATMENT.

"If the last quarter of a century has taught us anything in medicine, it is this fact, that all active treatment in the management of infectious diseases, such as the one under consideration, erysipelas and the like, with a view of cutting them short, is utterly futile, and if such treatment disturbs in any way the natural functions of the body, it is absolutely injurious.

"When this patient entered the hospital he was costive, and hence we gave him a mild cathartic of carbonate of magnesia and syrup of rhubarb. More than this, we did not think it best to do at the present time. We find that his temperature has a tendency to remain at and exceed 40° during the exacerbation of his fever. We shall now direct our attention to the reduction of this patient's temperature.

"To effect this object we shall use cold water. The next question that arises is how are we to use this agent. Many, especially the Germans, are in the habit of immersing their patients in a cold bath. To this practice I object on two accounts:

"First, to carry it out well, we must have bath-rooms and bath-tubs annexed to each ward, thus increasing the expense and labor connected therewith.

"Second and chiefly, I object to repeated baths for typhoid fever patients on account of the disturbance and muscular effort that is connected with their administration.

"Instead of this practice we shall have our patient sponged off with cold water of from 10° to 15° every two to four hours during the height of his fever. But a practice that I have lately followed, and which I can strongly recommend is the injection of cold water into the rectum. For this purpose I use water of about 12° and to each injection I add two grams of salicylic acid. The quantity that I use is from 500 to 1,000 grams, according as the patient can contain it. These injections we try

to induce the patient to retain from thirty to sixty minutes and repeat them every four to six hours. Some have even recommended them to be given at the freezing point, but this extreme cold we have always found to disturb the patient's nervous system."

Prof. Bernutz who has charge of the gynæcological wards in this hospital, has also one male ward that is devoted largely to typhoid fever cases. I followed him for three months and will give the two following cases as examples of his management of this disease:

Y. L., aged twenty-seven years, a waiter in a café, was admitted to the wards Sept. 15th, giving a history of diarrhœa and alternate sensations of heat and chilliness for ten days before he entered. On the day of his entry his morning temperature was 38 and evening 39.1. For the next six days after his admission the course of the disease was not marked by any special phenomenon, except that his diarrhœa was rather excessive, the discharges amounting to from eight to twelve in the twenty-four hours. The entire treatment during this time consisted of one half gram each of sulphate of quinia and tannin given night and morning.

On the 25th, or ten days after he came in, the slight bronchial irritation from which he had lately suffered became worse, he was harrassed by an irritating cough so that he got but little sleep day or night. At this date, a solution of the acetate of ammonia, sweetened to a syrup and to which was added a small quantity of ipecacuanha, was prescribed as an expectorant. On the 27th the lower lobe of the right lung was found consolidated, his pulse was 130 and weak, his temperature was 40.2 and his hands were slightly cyanotic. On the 28th his pulse was 135, temperature, 40.5, respiration 40, and the cyanotic condition of his extremities was more marked.

He was now ordered sixty grams of brandy and two grams of quinia every twenty-four hours. The patient gradually grew worse and died on the 30th.

On the 1st of October the autopsy showed both lower lobes of the right lung in a condition of red hepatization, the spleen enlarged to four times its natural size, studded with infarcted spots and soft in texture. The glands of Peyer in the vicinity of the

cæcum, extending also for one and a half centimeters into the ileum, were either ulcerated or congested and swollen.

On October 15th, G. Golosko, a Russian, aged 21, was brought from his hotel into one of the private wards of La Charité, under the service of Prof. Bernutz. He had been sick for two weeks before he was admitted, and had the petechial eruption and other distinctive symptoms belonging to a true case of typhoid fever. He had but little diarrhœa, but suffered extremely from headache and an harrassing, tickling cough. His morning temperature was 38.2, evening 39.6. He was put on a slightly acidulated solution of muriatic acid, flavored with lemon-juice, and one gram of quinia in the twenty-four hours. The acid given was not in a sufficiently large dose to be considered in the light of any medication. The patient not being able to speak French, but speaking German, I acted as interpreter between him and his physician and nurse, and so had to visit him two or three times a day.

On the second day that I made my visit to him in company with Prof. B., he appealed to me for the sake of heaven to ask the doctor to give him something to ease his head and check his cough. Communicating his wishes to the Professor, he replied that "all was being done for him that could be done." I then asked (in a modest way) whether some mild form of opiate, say a Dover's powder at night, might not act well by easing the patient's headache and arresting his cough. His reply was: "I never give opiates or any form of anodyne in typhoid fever on account of its tendency to obstruct the action of the heart. I think it a matter of the first importance that nothing should be done in this disease to cripple the great center of circulation, and this I think opiates have a tendency to do."

Some years ago a celebrated Professor of materia medica, by means of the sphygmograph, demonstrated to me that the effect of both opium and digitalis upon the circulatory system, is to increase the muscular contractility and force of the heart's action, as well as the blood pressure in the arteries; yet this venerable old man, who has practiced his profession for half a century, and has made a name that is known the wide world over, tells me positively that both these remedies have exactly the opposite effect

to that which I have been taught to believe that they possessed.

This patient began to convalesce slowly on the 30th of October, and was discharged on the 16th of November, or one month after his admittance.

ACUTE RHEUMATISM.

Léon Patry, aged 21 years, a painter by trade, was admitted to LaCharité Oct. 10th, 1878, suffering from acute poly-articular rheumatism. Eight days before his admission, he began to have pains in his joints, chilly sensations when he came in contact with currents of cold air, and a general feeling of malaise. On making his regular visit to the wards, at the date above mentioned, Dr. Dieulafoy (inventor of the aspirator that bears his name) lectured at the bed side of this patient. He said:

"This is a good type of acute articular rheumatism. The patient had some ill-defined symptoms for several days previous to his entry into the ward, but three days ago he was taken violently ill. His knee and ankle joints on both sides are much swollen and extremely painful. His temperature is 40.3, his pulse is 130, and his respirations are 45 per minute. From the anxious aspect of this patient and his extreme dyspnœa, it is evident that he is suffering from some impediment to his respiration, his circulation, or both. The careful physical examination of his case which I have just made, and which, if the patient is not too much fatigued, I will allow you all to verify, reveals the following conditions: Placing the stethoscope at the junction of the fourth rib, with the sternum on the left side, we hear a dry friction sound *bruit de frottement*. This sound is synchronous with both the systole and diastole of the heart. By making a pretty firm pressure with the stethoscope it is considerably increased in intensity. This sound to which I first call your attention, is peri-cardial in character, and, being a dry sound, it proves the existence of pericarditis in the first stage. I want you all to study this sound well, not only now, while we have the first stage of this disease, but later when the sound will probably be altered in character by an effusion of fluid into the peri-cardial sac. It is one of the conditions that men who are not skillful in physical diagnosis constantly overlook. If we place the stethoscope over

the point where we see the apex beat, we hear another sound, *bruit de souffle*, which is synchronous with the ventricular systole. The sound that we hear at this point is endo-cardial in character, and is produced by an impairment of the function of the mitral valve, showing the existence of an endo-carditis. We will now allow the patient to sit upright, and examine his chest to see whether we cannot find some lesion in this region. Synchronous with the respiratory movements of the lungs, we hear a friction sound on both sides, which is dry throughout on the left side, but is moist at the lower portion of the right.

"We have then in this case, beside the general affection of the joints, a peri-carditis, an endo-carditis, and a double pleurisy with a slight effusion into the right pleural cavity. A point to which I wish to draw your attention in connection with this case is the morbid phenomena that we have found situated in thoracic cavity. By most writers and teachers, whenever a rheumatic inflammation attacks any part of the body other than the articular surfaces of the joints, we are taught that such manifestations of the disease are to be looked upon as accidents or complications. This idea is an entirely erroneous one. The disease may attack any of the fibrous tissues of the body, but has a preference for the fibrous structures that go to make up the linings of the various serous cavities. Therefore an endo-carditis is no more a complication of rheumatism than an inflammation of any one of the joints of the extremities.

"The pleurisy we have in this case is one of the accompaniments of this disease that may be very easily overlooked, for, strange as it may seem, the suffering from this form of pleuritis is not as great as in other forms of acute pleuritic inflammation. The effusion is also much more likely to be rapidly absorbed than where it originates from other causes.

TREATMENT.

"The first remedy, that occurs to every physician at the present day, in connection with the management of a case of acute rheumatism, is the salicylate of soda. In this case we will not give this drug, and for this reason. Its physiological action is to lessen the contractile force of the heart and to decrease the

blood pressure in the capillaries; and as we have in this case already a crippled heart, accompanied by a cyanotic condition of the skin in the extremities, we consider the salicylates as contra-indicated. Were the heart and its investing membranes unaffected, we should give this remedy in full doses, and expect a good result from its administration. We shall give this patient for the next twenty-four hours:

Digitalis leaves		50
Sodic bicarbonate	4	
Quinia sulphate	2	
Camphor		20

"The digitalis to be infused in 100 grams of water, one-fourth to be taken every 6 hours. The bicarbonate of soda we will give also in four doses, each dissolved in 200 grams of water, flavored with syrup of raspberry. The quinia we will give in 0.50 gram doses, and the camphor we shall give in two doses, one night and morning."

The record of this patient's highest temperature, respiration and pulse was as follows for the days here given:

Oct. 11th.—Temperature, 40; pulse, 125; respiration, 46.

Oct. 12th.—Temperature, 39.5; pulse, 121; respiration, 44.

Oct. 15th.—Temperature, 38.6; pulse, 104; respiration, 34.

At the last date the quinia was reduced to one gram in the 24 hours.

Oct. 22d.—Temperature, 38; pulse 100; respiration, 25. At this last date the acute symptoms had mostly subsided. The patient was free from pain, there was a slight peri-cardial and pleuritic effusion, and the endo-cardial murmur was a little more accentuated than when at the first examination. The sodic bicarbonate was now discontinued, and the iodide of potassium given in its stead. He was also given a small amount of claret wine.

Oct. 31st.—Temperature, 37.2; pulse, 90; respiration, 20. The patient was now pretty comfortable sitting up in bed, but had still a loud mitral, regurgitant murmur. I omitted to mention in the right place that the patient had a large cantharides blister applied over the heart, on the 12th of October. He left the hospital on Nov, 9th, free from pain but feeble and still

showing the mitral lesion that came on during the first days of the attack.

I will close this article with the following brief account of a case of acute rheumatism that I have under observation at this date, Feb. 1st., at the Charité, of Berlin. J. Kapp, a young man aged 20 years, was admitted on the 9th of January last. He had always enjoyed good health excepting a former attack of this disease, for which he had been treated in this institution two years ago, and from which he entirely recovered.

Prof. Frerichs brought this patient into the lecture-room on Jan. 11th, and the following is a brief summary of some of the points made in his discourse at his bedside.

The disease is not generally ushered in by a chill. It usually approaches somewhat insidiously, so that the patient is unable to say exactly when he was taken ill. The nature of the disease has been a subject of controversy from the earliest times.

Chemical changes in the blood, small emboli going out from an ever supposed endo-carditis, and an infectious poison are among the causes that are supposed by different authors to produce this affection.

As to the first two supposed causes, they rest on hypotheses only, with no proof whatever to substantiate their truth. As to its being an infectious disease, that he thought entirely improbable, as the affection had no regular course or limit of duration, which was a characteristic of diseases of that type.

The best course, in the present state of our knowledge on this subject, is to own frankly that we do not know what is the true and intrinsic cause of this disease.

TREATMENT.

There is no disease in which it is so difficult to test the efficacy of remedies, as the one we have under consideration. The reason of this is obvious. The case may terminate in spontaneous convalescence in 24 hours, or it may run as many days or even weeks. Hence it is that all manner of remedies have had a reputation in turn for the cure of rheumatism. He would not even burden the mind, he said, with an attempt to recapitulate these agents, excepting so far as related to those that had not

fallen entirely into disuse. The alkalies and lemon juice were highly extolled by the English, and the former was even thought to be a specific by Dr. Fuller and some other medical authorities in the British islands.

For his part, after an extended trial, he had little faith in either, but gave the lemon juice the preference because it was sure to do no harm and was pleasant to take. The last remedy that had been recommended in the treatment of this disease, and with which he was now experimenting, was the salicylate of soda. "To this patient we will give .50 grams of this drug every hour, and see how the case will terminate." The highest temperature for the days here mentioned was as follows: Jan. 11th, 39.8; Jan. 12th, 39.2; Jan. 13th, 37; from the 14th of January to the 18th, 36.8.

As will be seen, after two days' administration of this drug the patient was in every way better; his pain had disappeared and he was entirely comfortable.

On the 14th, however, the salicylate was discontinued and .25 grams of sulphate of quinia three times a day substituted in its place.

On the 19th there was a sudden change for the worse; the left knee and elbow joints became swollen and inflamed, and the temperature showed for the next days thus: 19th, 39.6; 20th, 40; 21st, 39.8; 22d, 40; 23d, 40; 24th, 39.5. At this last date the patient was brought before the class again, and Prof. Frerichs said that in the first outset of the disease the salicylates had *seemed* to do good, but the remedy had now been given for five days, viz., from the 19th to the 24th, in doses even as high as 1 gram per hour, with no apparent benefit. He further said that if the temperature rose again to 40, and seemed inclined to remain at that point, he should begin the use of the cold bath, which he always did when drugs failed him.

For the next week this unfortunate man was used as material by Dr. Litten, to illustrate to his class in physical diagnosis, both dry and moist peri-cardial and pleuritic sounds, as well as mitral regurgitation and aortic, obstructive and regurgitant murmurs. Prof. Frerichs considers this case as an example of the

failure of the salicylate treatment of rheumatism, but says, as he knows nothing better, he will give it a further trial.

I have quoted this case for the express purpose of criticising the manner in which this eminent professor used and claims to have tested the efficacy of the drug under consideration.

As the reader will see, the medicine did at first all that its advocates claim for it. At the end of two days the patient was in every way better, and seemed on the high road to recovery, but on the third day the drug was discontinued, and, as Prof. Sée would have expected, a relapse followed.

If the reader remembers my report of Prof. Sée's experiments with this agent in the disease under consideration, he will see that whenever the drug was entirely discontinued soon after an amelioration of the patient's condition, a relapse always followed. It was found that a short time after the drug was discontinued, all traces of its presence in the urine disappeared; hence the inference that it had been entirely eliminated from the system. The remedy, therefore, should not be discontinued until all danger of a relapse is past, a period not less than ten or twelve days.

Why the remedy did not produce so decided a change for the better after the patient grew worse on the 19th, can perhaps be explained by the sudden series of organic changes that occurred at this time in the heart and pleura.

W. S. CALDWELL.

BERLIN, Feb. 1st, 1879.

DR. A. REEVES JACKSON, the founder of the Woman's Hospital of the State of Illinois, and its surgeon-in-chief during the past eight years, has resigned his position in that institution. His example was followed by the entire surgical staff. Cause—the interference with the work of the medical board on the part of some of the board of lady managers.

The daily papers of this city have since announced that a new surgical staff has been secured for this hospital, consisting of Drs. Byford, Roler, Nelson, Merriman, Sawyer and Flood.

Domestic Correspondence.

ARTICLE XIV.

NEW YORK LETTER.

NEW YORK CITY, Feb. 10, 1879.

GENTLEMEN: The over-crowded condition of New York has long caused it to have the highest death-rate of any American city, although the Board of Health is a very efficient one, and since its establishment has diminished the mortality considerably. This winter, however, it is likely to be larger than usual, owing to the great prevalence of scarlet fever. There have been and are now between two and three hundred cases every week, while the number last year was only about eighty. The cases have often been of a very malignant type, and in some weeks more than fifty per cent. have died. It is impossible to say what has brought on the epidemic. The public schools have disseminated it but slightly, although many of the buildings are ill-ventilated and unhealthy. A health officer visits each one every morning, reads off the localities where there are scarlet-fever cases, and if any of the children live in that locality they are excluded from school.

Diphtheria in this city, as in others, follows a regular line of increase or decrease. The number of cases here slowly increased until 1873, when it reached its maximum; since then it has been steadily diminishing. There are perhaps ten cases a week less this year than there were last.

The medical schools have been very flourishing. There are now probably over fifteen hundred medical students in the city—a number larger than in all England a year ago. Of the three

large colleges, the University Medical College and the College of Physicians and Surgeons have had a considerable increase in students, while there has been a slight decrease at Bellevue Hospital Medical College. Each one of these institutions has its particular advantages, and it is not a matter of great importance which is chosen by the aspirant for a degree. The College of Physicians and Surgeons is the most "aristocratic" and has a better educated and better appearing class of students. Its strong point is its gynæcology, although in chemistry, surgery and pathology it also has perhaps the best men. The University gives the student more for his money, and boasts of its Loomis, who is the best teacher of medicine in the city. Bellevue makes much capital out of its name, and shrewdly words its announcements so that one might think it had a monopoly of Bellevue Hospital. It does get its students into that institution rather more than the other colleges, but it has no more claim upon it than they and but few more clinics there.

There are two female medical colleges in the city which have been vainly struggling for a respectable position. They continue to be feeble, partly because there are two and their forces are divided, partly because there isn't a supply of medical students. After examining a catalogue of one of these colleges, nothing can seem more ridiculous than an outcry against the intolerance and narrow-mindedness which excludes women from a medical education. There are in the catalogue the names of over thirty instructors, most of them well-known and eminent in their profession. And there are, on the other hand, some half-dozen grim girl graduates. Two professors to each pupil! Truly this is not oppression. It seems rather like meeting with magnificent liberality the Galenic aspirations of the female mind. The students are admitted to the hospital clinics, and eight or ten, it must be confessed rather scraggy-looking young women, may generally be seen upon the benches.

The hospitals and medical education here are almost entirely in the hands of the Regulars. There is one city hospital under homœopathic control, which treats chronic cases and the refuse of other hospitals. Amongst practitioners there are a number of wealthy and fashionable homœopaths—who have dropped most of

their homœopathy—and who minister to the therapeutical idiosyncrasies of the ladies.

But New York's pet institution is its Woman's Hospital. Ten years ago the fashionable thing was obstetrics and Fordyce Barker; now it is gynæcology and T. Gaillard Thomas. The Woman's Hospital, as its annual report proudly asserts, is the only institution of its kind in the country, being devoted entirely to gynæcology. It is supported by endowments and subscriptions. The sum of $1,000 entitles one to have his or her name engraved upon a marble slab, which already proclaims the *aeternum decus* of dozens of philanthropists in the halls of the hospital building. The supporters and subscribers are amongst the *élite* of the city, and aristocracy turns its eleemosynary attention to leucorrhœal disturbances with a charming enthusiasm.

The hospital consists now of two separate four-story buildings, with a cottage for ovariotomies. Each building accommodates fifty or sixty patients. There are some free beds, but most of the patients pay from $4 to $15 per week. There are three wards in each building, one on each floor, besides private rooms. These wards are neat and comfortable, but without any elaborate decorations or appliances. Each bed is surrounded by curtains, a convenient arrangement on account of the necessity for frequent examinations. The hospital is a much-governed and much-visited institution. It has a board of governors, a board of lady supervisors, and a medical board and staff, the latter amounting in all to twenty-five for the hundred patients in the buildings. There is, however, an out-patient department which engages some of the medical officers. The character of the hospital is essentially surgical, and very fine results have been obtained in some directions. Operations upon the cervix and perineum are very popular, and almost uniformly successful. During the twenty-five years of the hospital's existence, ending a year ago, fifty-two ovariotomies were performed, of which one-half died. The per cent. of recoveries has lately been immensely increased. Since last October there have been a great many operations, some fifteen or twenty, without a death, although some of the cases were very bad ones. This record was interrupted only a short time ago. A woman entered the hospital in a very weak condition,

with a large abdominal tumor. This tumor had a characteristic fluctuating feel, and seemed to be undoubtedly cystic. There was some doubt, however, as to whether it was ovarian or uterine. The woman failed to improve in her general condition, and operation was undertaken as a last resort. The usual short incision was made, and a tumor of immense size, but without adhesions discovered. A large trochar was pushed into it, but withdrew no fluid. The incision had therefore to be extended to the ensiform cartilage, in order to get out the tumor. The pedicle was short and thick, requiring the largest clamp to hold it. After clamping, the tumor was cut off, the stump ligatured and sewed into the abdominal wound, and the clamp removed. In the pedicle was an artery nearly as large as the femoral. The tumor itself proved to be a solid fibroid, probably uterine, and which had appeared at the very last moment, even to the experienced touch of Dr. Thomas, to be cystic. The woman failed to recover from the shock of the operation.

It is impossible not to admire the thoroughness with which every precaution is taken to secure the success of this climax of surgical art. There is a small, isolated wooden building erected especially for the operation and immediate after-treatment. At the time of operation the temperature is raised to that of the body. The antiseptic treatment was used, but has been generally abandoned as unnecessary or worse. There is a profusion of assistants, and of instruments for every possible emergency. With all these provisions, and with the high reputation which its recent great successes have gained, it is natural that ovarian tumors from the regions all around should gravitate toward the Woman's Hospital. The number of operations, as well as the per cent. of recoveries, is increasing every year, and at the present rate we can almost predict a time when the abdomen will be opened here with as little anxiety as an abscess.

ARTICLE XV.

CALL FOR A CONVENTION OF ALL AMERICAN MEDICAL COLLEGES, to be held in the City of Atlanta, Ga., beginning at 10 A. M., Friday, May 2d, 1879.

Editor Chicago Medical Journal Examiner.

DEAR SIR: At the meeting of the "American Medical College Association," held in Buffalo, N. Y., June, 1878, Prof. S. D. Gross, a delegate from Jefferson Medical College, of Philadelphia, offered the following preamble and resolutions:

"WHEREAS, It is eminently desirable that the medical schools of this country should adopt a uniform system of instruction of a grade fully in accord with the requirements of the age in other branches of study, and with the practice of the medical institutions of Europe; and,

"WHEREAS, All the efforts to bring about such a change on the part of the American Medical Association, of the Association of Medical Teachers assembled at Cincinnati in 1867, and at Washington in 1869, and of different State medical societies, have signally failed, and,

"WHEREAS, The present time seems to be peculiarly favorable for taking strong ground upon the subject, inasmuch as it is now attracting general attention throughout the United States; therefore,

"*Resolved*, That this Association respectfully and earnestly request that the regularly organized and accredited medical schools of the United States hold, at their earliest convenience, a meeting for the purpose of adopting some definite and final action upon a subject of such vital importance to the dignity, character and usefulness of the profession, and the welfare of the American people.

"*Resolved*, That in order to impart proper efficiency to this plan, each and every college be requested to send two delegates, consisting of one member of each Board of Trustees, and one

member of each Faculty, with full power to act for their respective institutions.

"*Resolved*, That the medical and secular press throughout the United States be respectfully requested to lend their aid in the dissemination and discussion of these preambles and resolutions, in order to place the whole matter of medical education prominently before the profession and the people.

"*Resolved*, That a copy of these preambles and resolutions, signed by the President and Secretary of this Association, be transmitted to the officers of every regularly constituted medical college in the United States, with a request to hold the contemplated meeting at Washington City, or at some other central point, on the first Wednesday in September next, or as soon thereafter as possible."

Prof. N. S. Davis seconded these preambles and resolutions, and heartily endorsed them.

Prof. T. G. Richardson moved that the time of the proposed meeting be fixed at the Friday preceding the meeting of the American Medical Association, and that the place be designated by the President of this Association. This amendment was adopted, and the preamble and resolutions as amended, were adopted.

In compliance with this action of the American Medical College Association, its acting President, Prof. N. S. Davis, of Chicago, has designated *Atlanta, Ga.*, as the *place* of the proposed convention, while the aforementioned action of the Association has fixed the *time* at 10 A. M. Friday, May 2d, 1879. It is earnestly hoped that delegates from all "regularly organized and accredited medical schools" in the United States, will promptly meet at the above designated time and place. That the action of the convention may be definite, it is desired that each college send two delegates, with full power to act for their respective institutions—one of these delegates to be selected from the Board of Trustees, and one from the Faculty.

In general terms, the *object* of the convention is to adopt some "uniform system of instruction more in harmony with the requirements of the age." Among the questions appropriate for discussion and decision may be memtioned, "Shall all the colleges

require attendance upon three regular courses of lectures during three separate years, ere admitting students to become candidates for the degree of M.D.?

Is any uniform system possible in this or other things? If so, to what extent is it possible or even desirable at the present time? Each doctor in the land doubtless has in mind an ideal medical college system. But this convention cannot act upon idealities; it can only act upon that which is practicable to all honest efficient medical schools.

It is hoped that the medical press and teaching fraternity will freely and exhaustively discuss the subject matter of this convention. The doing of this at once will enable it to enter upon its labors with a very complete knowledge of the facts in the case.

To avoid misconception, let it be distinctly noticed that, although this convention is called by the "American Medical College Association," it is entirely distinct from that body. When assembled, the convention will elect its own officers and adopt its own methods for transacting its business in pursuance with the object of the call.

Signed, NATHAN S. DAVIS, M. D.,
Acting President of the American Medical College Association.

LEARTUS CONNOR, M. D.,
Secretary, Detroit, Mich.

FEBRUARY 6TH, 1879.

P. S.—It is desired that those colleges which decide to attend the aforesaid convention by delegates, will send notice to that effect to the Secretary at any time previous to April 25th.

POWDER FOR USE IN NASAL CATARRH—Beverly Robinson:

Iodoform, porphyrized,	4
Camphor, powdered,	4
Gum arabic, powdered,	8

Mix. For use several times in the day.

Editorial.

ARTICLE XVI.

NEW MEDICAL JOURNALS.

New medical periodicals have been appearing so frequently that it had become a matter of little comment with us to find a new specimen copy upon our table every few months. Many of them lived but a short time; their ephemeral existence ceased before the ink which announced their appearance to the reader had fairly dried.

A study of the mortality statistics of American medical periodicals can easily detect the principal cause of the high death-rate among them. The *causa proxima*, of course, is want of patronage. The subscription list remains so small that the publisher is soon convinced, continuation of his medical journal is equivalent to sacrificing so many hundreds or thousands of dollars upon the altar of medical journalism. And as his charity does not reach this height of enthusiasm, the publication is suspended.

But from the scanty patronage of many periodicals it must by no means be inferred that American physicians lack the profoundest interest in the progress of that science to which they have devoted their life. This conclusion would be entirely fallacious. On the contrary, we believe reading of periodical medical literature is more universal with the profession of this country than with that of any other nation; we know to an American physician a medical journal is as necessary a companion as the daily newspaper to every American citizen.

The trouble is, too many medical papers are published, not to supply a real want, but for purposes altogether foreign to, and incompatible with the dignity of scientific journalism. But the

body medical is quick in discriminating between cheap, worthless publications and meritorious medical journals. It supports the latter and rejects the others.

New medical periodicals of lasting value will be brought out only when and where the increasing number of scientific workers develops a natural demand for new channels through which they can communicate to the profession the results of their investigations and observations. Such periodicals are always welcome and will not fail to receive the hearty support of the medical profession.

We have recently received a few new exchanges of this kind, which we wish to recommend very warmly to the attention of our readers. Their *raison d'être* is the growing scientific activity in the American medical profession; their *aim* is solely the advancement of medical science; their *standard* is of the highest order and equal to the best medical periodicals of Europe.

We will give our readers a brief description of these new journals:

1. INDEX MEDICUS, A MONTHLY CLASSIFIED RECORD OF THE CURRENT MEDICAL LITERATURE OF THE WORLD. This is the title of a new periodical, edited by Dr. John S. Billings, Surgeon U. S. Army, and Dr. Robert Fletcher, M. R. C. S., England. The January number is before us, and it surpasses the most sanguine expectations which could be excited by the pretentious promise held out in the prospectus that it should record the medical literature of the world. The list of medical periodicals alone which are received by the editors fills twenty-four quarto pages. The remaining forty-eight pages of the number contain a list of all books, pamphlets and original articles published during the last quarter of the past year. The subjects of this index are arranged under the following heads: Anatomy and Physiology, with five subdivisions; Medicine, with sixteen subdivisions; Therapeutics and Materia Medica, with four subdivisions; Surgery, with ten subdivisions; Gynæcology; Obstetrics; Diseases of Children; Ophthalmology; Otology and Diseases of the Nose and Throat; Diseases of the Teeth; State Medicine; Veterinary Medicine, Miscellaneous. It is scarcely necessary to demonstrate the immense value of such a work for any practitioner, teacher

and writer. In its pages he will find the titles of parallels for his own observations, accounts of new remedies, the latest methods of therapeutics and full information of what has been written by others on any subject he may wish to investigate.

It is a gigantic task, conceived and executed by that same energy of American enterprise which has built the Pacific Railroad, tunneled our lakes and realized in the telephone the most fanciful of dreams.

The INDEX is published by T. Leypoldt, 37 Park Row, New York; subscription three dollars per annum.

2 Another very important addition to American periodical medical literature is the AMERICAN JOURNAL OF OTOLOGY, edited by Clarence J. Blake in conjunction with other aural surgeons of national reputation. It is a quarterly journal of about eighty pages, intended as a medium for the publication of original communications on physiological acoustics and aural surgery, also to furnish carefully prepared reviews of books treating of subjects pertaining to acoustics and diseases of the ear, and to give a digest of the more important papers on aural surgery, published in other periodicals and in reports of medical societies.

The fact that the American text-books on diseases of the ear are acknowledged to be the best works of this kind in the English language; the recognition all the world over of the transactions of the American Otological Society as valuable scientific contributions; and the high standing of the editors of this journal, are a sufficient guaranty for its success, as a promoter and exponent of science. Whether it will be a success for the publishers depends solely upon the interest the American medical profession will show for it by a liberal patronage, which it justly deserves. It is published by William Wood & Co., 27 Great Jones street, N. Y. Price, three dollars per annum.

3. The ARCHIVES OF MEDICINE, edited by E. C. Seguin, M.D., in connection with other gentlemen of high standing, may well be mentioned side by side with its other two new American contemporaries. Its pages are open for scientific original communications and observations upon matters relating to medicine; some space also is allowed for book reviews and summary. The

first number is a fine specimen of medical Journalism, both as to the reading matter and to the press work.

The truly scientific spirit which pervades the pages of the *Archives* reminds us strongly of the *Archiv. der Heilkunde*, which, after 20 years of existence, had to be suspended for want of patronage. Let us hope this journal will meet with a better fate than its German namesake. It is to be a bi-monthly journal, published by G. P. Putnam's Sons, 182 Fifth avenue, N. Y. Subscription price, three dollars per year.

4. With the foregoing periodicals we wish to rank a publication which was started last year by the united efforts of a number of English and American scientists, and which deserves the support of all physicians whose interest is not limited to reading on strictly practical subjects. Physicians, then, who in their spare moments like to learn what is going on in the collateral sciences, will find enjoyment in reading the JOURNAL OF PHYSIOLOGY, edited by Michael Foster, M.D., in conjunction with others, and published in London and New York, 22 Bond Street, by Macmillan & Co. From four to six numbers will form a volume of about 500 pages. Subscription price, $5.25.

A CONFESSIONAL.—The *British Medical Journal* has established in its columns a confessional department, in which practitioners are invited to report failures, blunders and errors of all kinds.

The idea is such an excellent one that we hasten to profit by it. We invite all our readers who have to confess mistake, carelessness, ignorance or unavoidable failure, to contribute to such a department in this journal—and that whether they be repentant or unrepentant sinners. Such as may desire to append their names to their communications may do so, not for publication, but as a guarantee of good faith, the editors holding themselves strictly responsible for inviolable secrecy upon that point. Communications without names will be received and published if they bear internal evidence of truthfulness.

We are confident that a mistake, failure or blunder may thus be made to accomplish in the end a great deal of good.

Reviews and Book Notices.

ARTICLE XVII. — TRANSACTIONS OF STATE MEDICAL SOCIETIES.

1. *Transactions of the Thirty-third Annual Meeting of the Ohio State Medical Society, held at Columbus, May 14th, 15th and 16th*, 1878.

2. *Transactions of the Medical Society of the State of Pennsylvania, at its Twenty-eighth Annual Session, held at Pittsburgh, May*, 1878.

1. The transactions of the *Ohio State Medical Society* contain so much of interest that the society may justly feel proud of its achievements as reflected from the pages of this neat little volume.

The retiring president, W. H. Philips, undertook to show the shortcomings of the present practice in court, of taking the testimony of medical experts. "The parties are allowed to summon whom they please, to testify in their favor. Neither party summons a witness whose testimony he is not certain will aid his side in the case. The experts found in our courts are, therefore, men of pre-ascertained views, brought into court because they are advocates of some particular theory, which is needed to sustain the complaint or defense. Hence it is that in almost all our criminal trials experts are found swearing positively and directly contrary to one another. In the Stokes-Fisk case, for example, experts were equally divided in opinion as to whether the deceased died from the effects of the wound or the manner in which the ball was extracted." And to harmonize these opposing views of experts, and to inform the jury of the scientific principles which they shall recognize in making up their verdict, this duty rests

upon judges who, not being themselves medical experts, do not possess the knowledge necessary to determine real medical science from speculative theories. Medical experts should be medico-legal advisors to assist the court in forming a decision upon medical questions. But these advisors are hired in the interest of one party, and paid for their services by the interested party, consequently their testimony is not unbiased, and is always so contradictory that the legal profession looks with contempt upon medical witnesses. Judge Davis, of Maine, is quoted as having said: "If there is any kind of testimony that is not only of no value, but even worse than that, it is, in my opinion, that of medical experts."

Thus, the medical men have to bear the blunt of ridicule and contempt, which truly and justly belongs to the absurd, monstrous system in vogue in our courts. This needs a radical change, and to accomplish that with intelligence and success, we must study, as a model system, that of Germany. "In Germany alone has medical jurisprudence received a proper estimate of its worth. It was introduced into the German universities at their foundation, and made a part of medical education. The expert is made a government officer, holding his position because of his peculiar practice, skill, and fitness." * * * "Their appointment is continuous, and they owe it to neither party, but to the State. They make personal investigation of the facts in every case. Power is given them to take testimony. They may call experts as counsel if they wish, but these experts must have certificates, received from State examinations, of their skill in the specialty whose principles it is desired to apply. The facts and proofs, and the conclusions arrived at by the expert tribunal, are shaped into a written report, which is carefully preserved along with the report of the subsequent proceedings. So far as the court is concerned this report is conclusive." If the parties interested be dissatisfied with the conclusions of this expert tribunal, they may appeal to a second medical commission, and from its decision an appeal may be taken to the Supreme Medical Commission, comprising men of national reputation. The German government "recognizes the fact that experts stand to the court in the relation of assistants. It, therefore, denies to those who are interested the

choice of these assistants. The educational requirement renders the expert competent. His appointment by the State ought to render him impartial." The adoption of a similar plan is strongly advocated by Dr. Philips in the remodeling of the present method of precedure.

Dr. J. W. Hamilton gives us a very interesting report of cases of "Maxillary and Naso-pharyngeal Tumors."

Dr. C. S. Muscroft speaks very highly of sub-sulphate of iron as a local remedy for erysipelas, acute and chronic ulcers of the lower extremities, also "for injections in puerperal fever, attended with vitiated discharges from the uterus and vagina;" and, "in ulcerations of mucous linings of the nose, attended with fetid discharges."

Dr. Thad. A. Reamy illustrates by way of clinical reports the use of the curette in certain forms of uterine diseases. His experience with the instrument has been "extensive and eminently satisfactory as to safety and efficiency."

Dr. R. L. Sweney reports a case of an inverted uterus reverted seven months after its inversion.

Dr. C. H. Read has, for the past seven years, tested the efficiency of quinine as a prophylactic in scarlet fever, "but kept a full record only of twenty-nine cases of exposure." "Of these, twenty took quinine as a prophylactic. Of these twenty, nineteen, or ninety-five per cent., escaped. Of the nine who took no quinine, none escaped."

The report on the progress of ophthalmology during the year 1877, by Dr. D. B. Smith, may be recommended as a model to the attention of all committees of medical societies charged with the duty of making an annual report on the progress in the various branches of medical science.

2. It is a pity that the *Pennsylvania State Medical Society* does not appreciate the advantages of solid book-binding. Its transactions deserve a better fate than to be sent out with a simple paper cover and with the leaves stitched so loosely that after a short use they are out. Volumes of 500 large octavo pages have outgrown that embryonic stage of a book, called *brochure*, and, therefore, should not be dressed as a baby but treated as a full-grown adult.

The present volume contains addresses by eminent men, which deserve more than passing attention.

President D. Hayes Agnew selected for his address the very suggestive theme of "Errors of Diagnosis." Relating some famous cases of this kind, he endeavored to show that in the most of these cases errors of diagnosis could have been avoided, and their occurrence was due to superficiality in examination on the part of the surgeon. "Surgeons of large experience, by their great familiarity with disease, are often governed more by their intuitions in deciding upon the nature of a case, than by the tedious and cautious plan of analysis practiced in the earlier years of their career." "Such knowledge tends to engender a spirit of over self-confidence which may lead to fatal errors."

A large number of errors of diagnosis may be placed to the account of ignorance. To this source must be traced instances of undetected luxations of the humerus, cases in which hernia, varicocele, and hydrocele are confounded with one another, and similar blunders.

Errors of diagnosis not unfrequently originate perplexing litigations which might often be obviated if medical men were less officious and more reserved in expressing an opinion upon the skill of a professional brother. Every physician must blush over this statement of Dr. Agnew: "In almost every suit for malpractice with which I am acquainted, singular as it may appear, there has been a doctor at the root of it." This could not be the case if every physician adopted the policy advocated by the essayist. "I do not wish to be understood as advocating a policy which would shield any member of our profession from the just consequences of ignorance, recklessness, or neglect; but do say that any medical man who ventures to assail the professional skill, or to lessen the confidence of the public in a brothor practitioner, without being conversant with all the facts in dispute and having the most conclusive evidence of the correctness of his own diagnosis, deserves, in the highest degree, public censure, and should be ostracized by the entire body of medical men."

Dr. W. Goodell delivered a very interesting lecture on "Laceration of the Cervix Uteri," giving a graphic description of the local and constitutional disturbances this lesion may pro-

duce. It is an important factor in the production of uterine disorders and a common cause of sterility. The treatment, medicinal and operative, of fresh and old lacerations is dwelled upon very extensively, and his own mode of performing the operation fully described. Those interested in the subject will read this address with pleasure and profit.

Dr. Samuel W. Gross favored the society with an address in surgery, selecting for a topic, "The Rational Treatment of Stricture of the Urethra." The substance of his lecture is incorporated in the following axioms:

1. The rational treatment of stricture of the urethra consists in restoring the natural expansibility, or caliber, of the affected portion of the canal.

2. Before any operation, having this end in view, is practiced, the sensibility of the urethra should be obtunded, lest it resent the violence to which it is about to be subjected.

3. After the spasm and hyperæsthesia have been relieved, the caliber of that portion of the urethra in which the stricture is located, should be estimated by the urethrometer, with the view of bringing the affected portion to that standard.

4. Internal urethrotomy from behind forwards is the most effectual mode of accomplishing that object.

5. The meatus should not be interfered with, provided its circumference is eight millimeters less than than of the spongy urethra.

Dr. S. D. Risley gave a clinical analysis of one hundred and fifty-three cases of iritis. He found iritis had furnished four per cent. of all the cases of eye diseases coming under his care. Only fifteen cases were seen during the first week of the disease, in a very large number the true nature of the disease had not been recognized.

Syphilis stood out prominently as an efficient cause of iritis; *sixty* cases of the 153 were plainly due to this cause, and were for the most part associated with the secondary symptoms of the disease. *Four* cases were undoubtedly rheumatic, and *twelve* traumatic. In the remaining cases no cause was stated in the record. The *serous iritis* occurred in but four cases; all other cases showing the *parenchymatous* or *plastic* form of iritis.

Beside the use of atropine, local depletion and opiates ("Dover's powder in full doses, or morphia hypodermically"), mercury was freely employed. And it is worth recording, the opinion of Dr. R., founded upon the careful study of so large a number of cases: "I have repeatedly, for many days, used strong solutions of atropia in the most persistent and vigorous manner, assisted by the local abstraction of blood, with no effect upon the synechiæ, other than slightly stretching them; but no sooner were the gums spongy and a slight mercurial fetor of the breath, than the adhesions lost their tenacity, either melting down and disappearing as by magic, or becoming friable, lost their hold upon the capsule, and the pupil being free, expanded widely under the action of atropia."

"This beneficial action of mercury in iritis is by no means confined to cases of syphilitic iritis. In any case of acute iritis, with marked tendency to plastic exudation, the surgeon does not do his whole duty who fails to use mercury to the first manifestation of its systemic effects, except, possibly, in the comparatively rare cases where such an acute attack is obviously due to a gouty or rheumatic diathesis."

"The method of administration has many times seemed a matter of importance. Inunctions have certainly, in my experience, proved of greater value than the administration by the mouth in any form."

There are a number of other excellent papers in this volume, which contain many practical suggestions. Dr. William Pepper contributed a "Clinical study of Catarrhal Inflammation of the Bile-ducts, with Remarks on the Use of Nitrate of Silver in its Treatment." Dr. Lawrence Turnbull reported "Three Cases of Disease of the Mastoid Process," to show the difference in the clinical pictures of: (*a*), Inflammation of the external periosteum; (*b*), Acute inflammation of the mucous membrane, followed by accumulation of pus in the mastoid cells; (*c*), Chronic sub-acute inflammation of the mucous membrane, with sclerosis. The same author read a paper on his "Experiments and Observations on the Physiological Properties of Hydrobromic Ether."

Dr. E. Dyer contributed two short papers "On Sympathetic Ophthalmia," and "On the Metric System in Medicine."

"Anæsthesia in Parturition," by A. H. Halberstadt; "Rosacea," by John V. Shoemaker; "Psoas Abscess Simulating Nervous Affections," by Chas. K. Mills; "Some Remarks upon the Descent of the Testes, and the Formationof Oblique inguinal Hernia and Hydrocele," by O. H. Allis, conclude the series of original communications; they, with reports of committees, fill the first two hundred and fifty pages of the volume; the second half is given to the reports of the county medical societies. F. C. H.

Article XVIII.—Deterioration and Race Education. By Samuel Royce. Boston: Lee & Shepard, Publishers, 1878.

More than once, since opening the covers of this volume, we have been disposed to return it, as irrelevant to the subjects which come legitimately within the scope of a medical reviewer. There are, however, certain points of contact between the book and a class of subjects with which the physician is continually made familiar, which will justify a criticism of a portion, at least, of its contents.

The work appears to be the outcome of the researches and speculations of a professional philanthropist. Like the majority of kind hearted people, blessed with a scanty knowledge of men and things, emerging for the first time from the happy seclusion in which they have been cradled, he looks about him in the whirling throng of human creatures, and remarks with sympathetic pain the wretchedness which overwhelms so many of his fellow beings. The farther he looks, the more suffering he beholds. It certainly was not so during his childhood in the little nook among the hills where he was born; consequently the race has fallen upon evil days, and the times must be growing worse. He begins to read, and his discoveries appal him. Everywhere he finds for each year a higher figure for every form of crime, disease and death. In every State of the Union new prisons and new asylums are springing out of the ground, and yet the number of unhoused lunatics and paupers is continually growing. It must be so! Statistics prove it! Criminals are more numerous! Hospitals are more and more crowded! The insane are increasing! Poverty is rising like a flood! There are the figures, and they can not lie! Such is the course of reasoning by

which this author demonstrates the deterioration of the race. He has raked together an immense amount of statistical information of this kind; but so thoroughly is it dissociated from qualifying facts, that it is utterly useless and misleading in its character, for he makes no reference to the fact that the population has greatly increased between the years under comparison, and that improved methods of collecting statistics have swelled all later returns out of due proportion with the earlier tables. It is an error precisely similar to the blunder which one would commit were he to contrast the number of insane persons in the Cook County Asylum, fifteen years ago, with the number now cared for in that institution. Fifteen years ago there were not more than a dozen lunatics in the almshouse at Jefferson. The population from which they came was about one hundred and fifty thousand souls. That population has now increased four-fold, but the lunatics in that almshouse to-day, since the erection of the new building, number more than four hundred persons. In view of this fact, if we allowed ourselves to employ the logic of this book, we might justly infer that Cook county will soon be inhabited by insane people alone.

The fact is, that statistics are not to be trusted, for the information which will enable any one to decide whether the race as a whole is deteriorating. It is easy enough to trace the course of a family, or a tribe. The stalwart pioneers who have expended all their energies in grubbing stumps and fighting Indians in a malarious climate, are very likely to be succeeded by a puny offspring. Hardy laborers, transplanted from the hay field into the steaming atmosphere of a cotton mill, usually die young, and are followed by a scrofulous line of descendants. Ancestral piety avails little as a protection against the seductions of newly gotten wealth. But these are accidental and individual phenomena. If we would learn the truth of the matter, we must study the history of the world, and must compare the centuries with each other. Such investigation gives results very different from the conclusions of our author. Perhaps this may be one reason why he manifests such a contempt for those classical studies which make us acquainted with the ages that have passed, and are unknown to the majority of mankind.

This error of hasty generalization is the fault which vitiates all the conclusions of this book. It contains a vast heap of unverified assertions, with very little regard for logical sequence. The race, says the author, is growing continually worse, as a consequence of wrong methods of education and occupation for the masses. Our schools are devoted to training the young in a body of useless knowledge, such as history, reading, mathematics, languages, music, etc.; consequently, when young people leave school they are unfitted to earn their own living, and are never willing to do any useful work, preferring rather to "live by their wits." Our present school system should therefore be destroyed, and in its place should be provided kindergarten schools for small children, and manual labor schools for those of larger growth, in which young people should be taught the trades and the principles of agriculture. When the pupils have graduated from these places of learning, they will be so well skilled in all mechanical and agricultural arts, that of course they will always find abundant occupation and high wages. But since many of the trades are notoriously unhealthy, capitalists must be compelled to make them healthy. And since it has never been found possible to house the working people in factory towns without a great amount of over-crowding and misery, these operatives must all be furnished with houses in the country, where they can all have their gardens, and their pigs and poultry. But since the railway service necessary to carry laborers from the city factories to their rural homes is expensive, the railway owners must be compelled by law to carry such passengers for a nominal sum, or else the factories must all be moved out of town into the healthful country air. Inasmuch as these great improvements will not be undertaken by ordinary "bloated bond holders," laws must be made, compelling them to conduct their business on philanthropic principles, and we must have an army of inspectors and other officials, to carry out these beneficent laws.

Such, in short, is the argument of this book. It is the same line of reasoning with which one becomes so familiar in the volumes which record the proceedings of our Social Science Congress, Public Health Associations, Board of Health meetings,

and Philanthropical gatherings generally. It is the argument which is exceedingly popular with all benevolent people who feel acutely over sufferings which they witness, but who have not the knowledge with which to discover the true causes of such misery, nor the patience and energy requisite to undertake the measures necessary for their effectual relief. Something short, sharp and decisive is what they desire. *Stamping out* is their favorite phrase, and they care little how much evil may be done, if they are persuaded that good will come of it.

In all this, however, the benevolence which animates these people is beyond praise. The thing to regret is the misdirection of their energies. The improvement of the condition of the human species is their object, and it is the most laudable object in the world. But they mistake the way to the accomplishment of their desires, when they think to ameliorate the condition of mankind through the strong arm of civil government. The effort to secure such a result by the interposition of civic power has been tried again and again, and it has always failed. The real progress and improvement of the race has always been effected by other agencies, which have usually been compelled to array themselves in active opposition to existing governments. The entire history of the growth of liberty—which is the greatest blessing a human being can enjoy—is the record of a continual warfare against constituted governments. We in this country have secured the largest amount of liberty ever possessed for any length of time by any people, but we are by no means thoroughly emancipated yet. There is a constant effort on the part of the office-holding and office-seeking classes to increase their own profits and power at the expense of citizens. There is a constant tendency on the part of these classes to extend the functions of government to affairs with which it has no rightful relation in a free society. Such being the fact, it is a reason for regret when we discover the philanthropical portion of the community unwittingly seeking to aid the official classes in their insidious attacks upon the liberty of society.

Did time and space permit, it would be profitable to show the evils which always result from governmental interference with affairs outside of its legitimate province. Good government is

that which busies itself solely with the protection of the rights of its subjects—which secures for each individual the largest amount of liberty consistent with the liberty of his fellows. Just as soon as government undertakes other functions, its weight begins to bear oppressively upon individuals and classes in society. As soon as it becomes apparent that the strong arm of the State can be secured for the advantage or disadvantage of favored or disfavored individuals, a struggle begins to obtain in the direction of that power for private ends. The highest success in this effort produces a despotism—a monster from which we all recoil—but the community is full of people who are anxious to get acts of despotic departure from good government performed for their individual welfare. Every such act is not only an injury to the community and to the individual who fancies himself thus benefited, but it also works out its own final failure to accomplish the end desired. To make this clear, let us review a few out of the innumerable examples which might be adduced in proof of this proposition. English merchants during the last century thought it would be greatly to their advantage to have the trade and manufactures of America regulated by act of Parliament for their own benefit. The result was a bloody war, an addition of one hundred million pounds to the national debt of England, and the loss of the finest colonies ever possessed by the crown. Governmental interference with the natural laws of commerce was not beneficial in that case to the traders who were so clamorous for law in their own behalf.

Scarlet fever is a dangerous disease, of a rather communicable character. Not long ago there was a tremendous outcry for governmental interference to *stamp out* the disease. The result of a great deal of activity on the part of the official guardians of the public health, was, according to the published statistics, to raise the mortality of scarlet fever, in this city, from about ten per cent. to nearly thirty per cent. of the cases. This was the ostensible result. The real result was to produce an extensive concealment of the disease, for fear of the obnoxious and useless measures which are employed in the name of the law of the land. Now, when one reflects upon the fact that a case of concealed disease of this character is more dangerous to a community than

a case which is openly confessed, it is easy to see how much benefit we derive from such official interference. Syphilis is another terrible scourge of the human race. There are plenty of people —doctors too—who are crying out for a governmental inspection and purification of prostitutes, in order to restrict the prevalence of venereal diseases. Such people are very fond of quoting the results of such measures in the army and the navy, and have much to say about the vast diminution of suffering among the poor girls who are subjected to the periodical visits of the governmental inspectors. They are not in the least chary of their sneers at the "uncognid," as they call those who presume to question the wisdom of the measures which they propose, and are evidently quite unconscious of the fact that they are all the time writing themselves down in the catalogue of *ignorant sentimentalists: ignorant* because unacquainted with the natural laws which control such things, and *sentimentalists* because they allow their sympathy with the suffering of a certain worthless minority to close their eyes to the highest interests of the vast majority of mankind. This is not the place for a full discussion of the regulation of prostitution. It is sufficient for us to remind the reader that it has been again and again proved by the highest authority in such questions, that the hopes of prevention of syphilis by official regulation are fallacious; and that, even if the results of military experience in barracks, where soldiers are made to eat, drink, and copulate to the sound of drum and fife under the ever present eye of an officer, could be secured in the private life of every citizen, the consequent debasement of public morals would be sufficient to condemn the whole thing.

Again, if we consider the results of the administration of charity by the Government, we find that the intrusion of the civil power has been only disastrous in this field of effort. Consider the waste and the corruption which characterizes every branch of public charity administered by the government. Consider the complaints of the tax-payers who give to the poor through the official channels because they *must*, and not because they desire the relief of misery. Consider, also, the wide separation between rich and poor, which is thus intensified, for when the wealthy merchant has paid his tax for pauper relief, he will not listen to

the story of distress which is related at his door. We shut up our hearts and our purses when our taxes have been paid; consequently, we lose all the humanizing influences which flow from the judicious exercise of individual charity. Consider our public asylums and hospitals—how much more they cost than similar institutions supported by private benefaction—how difficult it is to secure in them the services of *good men*, while a private charity can secure in its management and service the best talent of the country. It is not too much to assert that our whole system of public charity, based upon governmental supervision, is productive of as much injury as good. It is the outcome of the impatience of people, who cannot wait for the slow operation of natural law, but must force an unhealthy and precocious growth by the aid of government. That the results of such methods should be fraught with evil is only what might be expected when we consider the source of governmental power. All civic governments reflect the masses of the population over which they are placed. The intellectual and moral level of the masses in even the most enlightened nation is very low, consequently the government which represents such masses cannot exhibit any very exalted tendences. It does not, therefore, furnish the right kind of motive power for the advancement of projects which look to the elevation and improvement of the race. Nature has provided a sufficient motive power in the moral and intellectual sense of the race; and it is to this that philanthropists must be content to appeal, if they desire a real and lasting success.

We have numerous societies for the benefit of people. One more organization is imperatively required—a society for the enlightenment and restraint of philanthropy. H. M. L.

BOOKS AND PAMPHLETS RECEIVED.

Lectures on Clinical Medicine, delivered at the Hôtel-Dieu, Paris. By A. Trousseau. Vol. III. Translated from edition of 1868, By J. R. Cormache, M. D.

A Practical Manual of the Diseases of Children, with a Formulary. By E. Ellis, M. D. Third Edition. Cloth, pp. 213. Wm. Wood & Co., New York. 1879.

A New Treatise on Assimilation and Digestion. By John Wesley Evans. Cloth, pp. 112. Quincy, Ill. 1878.

Diphtheria—Its Nature, Causes, Prevention and Treatment. By J. H. Kellog, M. D. Cloth, pp. 64. Good Health Publishing Co.

Sixth Annual Report of the Secretary of the State Board of Health of the State of Michigan for the fiscal year ending Sept. 30, 1878. Cloth, pp. 355.

Elements of Comparative Anatomy, by Carl Gegenbaur. Translated by F. Jeffrey Bell, B. A. The Translation revised by E. Ray Lankester, M. A. Cloth, pp. 645. London: Macmillan & Co. 1878.

An Introduction to Pathology and Morbid Anatomy. By T. H. Green, M. D. London. Third American Edition, from fourth revised and enlarged English edition. 132 Illustrations. Cloth, pp. 323. Philadelphia: Lindsay & Blakiston. 1878.

Habitual Drunkenness and Insane Drunkards. By J. B. Bucknill M. D. London. Cloth, pp. 103. London: Macmillan & Co. 1879.

Transactions of the American Otological Society, Eleventh Annual Meeting, Newport, R. I., July 24, 1878. Boston: Houghton, Osgood & Co.

Transactions of the American Ophthalmological Society.

Transactions of the Wisconsin State Medical Society. 1878.

Second Annual Report of the State Board of Health of Colorado. 1877.

On Loss of Weight, Blood-Spitting and Lung Diseases. By Horace Dobell M. D. Cloth, pp. 274. Philadelphia: Lindsay & Blakiston. 1878.

On the Surgery of the Face. By Francis Mason, F. R. C. S. One hundred illustrations. Cloth, pp. 170. 1878. Philadelphia: Lindsay & Blakiston.

Atlas of Diseases of the Membrana Tympani. By H. MacNaughton Jones. Cloth, pp. 28, beside plates. Philadelphia: Lindsay & Blakiston. 1879.

Diphtheria, its Nature and Treatment; Varieties and Local Expression. By Morell Mackenzie, M. D., London. Cloth, pp. 104. Philadelphia: Lindsay & Blakiston. 1879.

Naval Hygiene, Human Health and the Means of Preventing Disease, with illustrative incidents principally derived from naval experience. By Jos. Wilson, M.D., Medical Director of U. S. Navy. Second Edition. Cloth. pp. 274. 1879. Philadelphia: Lindsay & Blakiston.

A Contribution to the Medical Treatment of Chronic Trigeminal Neuralgia By E. C. Seguin, M.D. Reprint from *Medical Record*, Jan. 4, 1879.

Clinical Lecture on Syphilitic Brain Lesions. Reprint from *New York Medical Journal* September, 1878. By E. C. Seguin, M.D.

First Annual Report of the Presbyterian Eye and Ear Charity Hospital, Baltimore. 1878.

Case of Ovariotomy. By Ed. Bork, M.D. (Successful.) Reprint from *St. Louis Medical and Surgical Journal*, April, 1878.

Case of Ovariotomy. By Ed. Bork, M.D. (Unsuccessful.) Reprint from *St. Louis Medical and Surgical Journal.*

Transactions of the Detroit Medical and Library Association, January, 1879.

Report and Resolutions Relating to Sanitary Legislation, Presented to the American Public Health Association at its meeting in Richmond, Va. Nov. 1878.

The Sanitary Protection Association of Newport, R. I.

Placenta Prævia. By G. M. B. Maughs, M.D. Read before the St. Louis Obstetrical and Gynæcological Society, Sept. 19, 1878.

Journal of the Iowa and Illinois Central District Medical Association, Oct. 10, 1878. Rock Island.

Removal of Morbid Growths from the Uterus. By W. S. Ross, Evansville. Ind. Reprint from the *St. Louis Medical and Surgical Journal.*

One Hundred and Sixty-three Cases of Fracture of Neck of Femur, Collected and Reported by H. Wardner, M.D., Cairo, Ill. Reprint from CHICAGO MEDICAL JOURNAL AND EXAMINER, January, 1879.

Fifty-third Annual Report of Massachusetts Charitable Eye and Ear Infirmary for the year 1878.

On Fracture of the Femur. By Ed. Bork, M.D., with Illustrations.

Eighteenth Annual Report of the Alabama Insane Hospital at Tuscaloosa, October, 1878.

Conclusion of the Board of Experts authorized by Congress to Investigate the Yellow Fever Epidemic of 1878.

New and Original Theories of the Great Physical Forces. By H. R. Rogers, M.D.

Eight Cases of Intra-laryngeal Tumors Removed through the Natural Passages. By J. H. Hartman, M.D., Baltimore.

Aphasia, or Aphasic Insanity, Which? A Medico-legal Inquiry. By D. C. H. Hughes, St. Louis, Mo. Reprint from *American Journal of Insanity* Jan. 1879.

On Gastro-Elytrotomy. By H. J. Garrigues, M.D., with three wood cuts. Reprint from *New York Medical Journal*, November, 1878.

Address of W. O. Daniell, M.D., President of the Medical Association of Georgia, Delivered at Twenty-ninth Annual Meeting. Reprint from Transactions of Medical Association of Georgia, 1878.

Mansil's Almanac of Planetary Meteorology and New System of Sciences, 1879.

Summary.

Collaborators:

DR. H. GRADLE, DR. L. W. CASE, DR. R. PARK,
DR. R. TILLEY, DR. D. R. BROWER.

PRACTICAL MEDICINE.

TURPENTINE IN WHOOPING COUGH. (*Wiener Allegem. Med. Zeit.*, No. 12, 1878.)

Dr. Gerth cured a case of laryngeal catarrh by placing twenty drops of turpentine on a handkerchief, held before the face and causing about forty deep inspirations to be taken. Repeating this thrice daily, the cure was quite rapid. In the same family he found an infant fifteen months old in the convulsive stage of whooping cough, quite exhausted, and vomiting all ingesta. There was at the same time slight bronchial catarrh with slight evening rise of temperature. Gerth decided to experiment here also with turpentine. He directed the mother to hold the moistened cloth as above, before it when awake, and to drop the oil upon its pillow when asleep. The result was most happy. Within the twenty-four hours the frequency and severity of the attacks notably diminished. The child's strength was sustained by stimulants, and improvement was very rapid. Within a year pertussis became epidemic in his vicinity, and he repeatedly tested the drug in this way. He gave it to children of all ages, and in any stage of fever. The initial catarrh, the convulsive, and the final catarrhal stages were all decidedly benefited, the spasmodic attacks being in many cases aborted.

SURGERY.

VOLKMANN AND KRASKE. Report of the surgical clinic at Halle. Sixth annual meeting of the German Society of Surgery. (*Contralbl. f. Ch.* No. 50, 1878.)

The report contains only the larger amputations (including those of the breast), resections, operations for hydrocele, complicated fractures, and penetrating wounds of joints. (It must be remarked, that at no other clinic are the antiseptic principles more strictly obeyed than at Halle.)

There were, altogether, 183 exarticulations and amputations performed on 172 patients (*not* counting amputations of fingers, toes, and partial amputations of the hand).

Of these, 139 cases were uncomplicated, with a mortality of 2.87 per cent. (4 cases). One case of traumatic exarticulation of the humerus, and one of the thigh (also traumatic), died four hours after the operation. An amputation of the leg was followed by death from habitual erysipelas, while only one case of amputation of the thigh (out of 42) in which the injury extended beyond the nates, died after twenty-four hours.

Among the complicated cases there were:

(1.) Nine double amputations, with two cases of death from shock (amputation of the thighs).

(2.) Six amputations, complicated with severe multiple injuries, all fatal.

(3.) Fifteen amputations, performed on patients suffering from septicæmia or pyæmia, before entering the hospital; of these 8 died (52.3 per cent.)

(4.) Three patients, who died from intercurrent diseases, not depending on the surgical affection, viz: One delirium tremens, 1 genuine pneumonia, 1 case of abortion, followed by puerperal fever.

Therefore, of 172 patients, with 183 amputations, there died 23 cases (with 27 amputations), while 149 (with 156 amputations) recovered.

Ninety-one uncomplicated resections of large joints (48 hip-joints) were performed, with a mortality of 5 cases. Two children of three-fourths and 2½ years, died in collapse; 1 patient

succumbed to thrombosis of both crural veins, another to hæmorrhage from involvement of the crural artery in a lymph-gland abscess. One child died of basilar meningitis three weeks after the operation.

Four re-sections, complicated by previously existing hernia, proved fatal. In 2 other cases fatal complications existed in the shape of acute phthisis and of delirium tremens.

No cases were lost among 10 re-sections in the continuity of the bone. Among 50 osteotomies (necrosis operation) 1 case of hæmorrhage in hæmophilia represented the total mortality.

One hundred and nineteen amputations of the mammary gland were performed on 110 patients; the contents of the entire axilliary cavity were included in the operation seventy-five times. Six patients died, viz.: two of erysipelas, one in collapse a few hours after the operation, one from malignant pustule (infected with catgut), and two of marasmus from chronic suppuration.

Forty-five cases of hydrocele were treated by incision without any mortality. No deaths occurred, likewise, amongst *seventy-three cases of complicated fracture and twenty-four instances of penetrating wounds of joints.*

Pyæmia did not occur in a single case, septicæmia only in three cases of gangrene of the leg after ligation of the crural artery. Chronic septicæmia was observed very rarely; tetanus and erysipelas were each observed four times.

(Hitherto the partisans of Lister have referred to the success and shortened duration of single cases rather than to statistics, in order to prove the efficacy of the antiseptic method. With such statistics, however, as those of Volkmann, they can enter boldly into the ranks.)

OBSTETRICS.

THE UTERO-OVARIAN AMPUTATION AS COMPLEMENTARY TO THE CÆSARIAN OPERATION. H. Debauge. (*Lyon Médical*, Jan. 5, 1878.)

The utero-ovarian amputation in a woman subjected to Cæsarean section, was first practiced at Pavia, May 21, 1875, by Prof.

Porro. In this case it was an operation of necessity, being the only means capable of arresting a hemorrhage which threatened to be speedily fatal. The circumstances surrounding the patient were as unfavorable as possible; an epidemic of puerperal fever raged in the wards of the maternity, at Pavia; and yet, the experiment of Porro was crowned with complete success. At the end of six weeks his patient left the hospital, and was able to bear the fatigue of a journey of several hours.

Since this epoch, the example of Porro has had imitators. To-day his operation has become the complement of Cæsarean section in Italy, Belgium, Germany and Austria. The accoucheurs of France still hesitate to perform it.

Some months since, one of our young confreres, Dr. Imbert de la Touche, had the happy idea of making the new operation the subject of his inaugural thesis. His remarkable work is before us; and we think we may render good service in seeking to popularize a method calculated to lessen the mortality in an operation justly regarded as one of the most deplorable resources of surgery.

The Cæsarean operation, as Dr. Imbert remarks, has been performed forty times in Paris, and among these forty operations there has not been a single successful one. More fortunate, the surgeons of *la Charité*, of Lyons, in a series of twenty-five operations made between 1841 and 1878, have had one cure, belonging to Prof. Bouchacourt. A single success opposed to so many deaths, is indeed a sad result; and there is not another operation in surgery which gives similar statistics.

Among the causes which may be invoked to explain such a frightful mortality, there are three which deserve to be mentioned, because they are annulled by the method of surgeons of Pavia. First, the hemorrhage which follows the operation, a hemorrhage which comes either from the edges of the uterine wound, or from the placental site, and which too often resists all the resources of the operator. Second, the effusion into the peritoneal cavity, of blood, amniotic fluid, and the lochia, an effusion which the utmost precaution cannot prevent. Third, the inflammation which has its origin in the uterus, and from there extends throughout the peritoneum.

To obviate these three causes of death, there is but one resource, the one to which the surgeon of Pavia resorted; the excision of the uterus immediately after the extraction of the child. The necessity of removing with the uterus the entire system of utero-ovarian vessels, and the utility of protecting the patient from the periodic fluxions which the presence of the ovaries entails, led Porro to perform at the same time with the amputation of the uterus that of the ovaries and broad ligaments.

He was encouraged to enter this path by the results following ovariotomy and hysterotomy in affections of the ovary and uterus. The statistics of Péan, of Koeberlé, of Marion Sims, demonstrated to him that the peritoneum can support great injuries better than formerly supposed, and that by making some changes in the process followed in Cæsarean section, it might be possible to make of it something besides a nearly always fatal operation.

The beginning of the operation resembles that of ordinary Cæsarean section, up to the moment when, the uterus being widely open, the surgeon can proceed to the extraction of the child. This done, instead of separating the placenta immediately, the uterus is drawn out through the abominal wound, and kept there by strong traction. The assistants draw the edges of the abdominal wound together, compressing them about the uterine neck. The after-birth is not detached and removed until, by means of these precautions, the penetration of blood into the peritoneal cavity is prevented. The pedicle of the tumor formed by the uterus and its appendages, is clasped by the loop of a linear écraseur, and tightened sufficiently to arrest the flow of blood. All the parts are then removed with the bistoury to within two centimeters of the chain of the écraseur, then the stump thus obtained is traversed by a long needle through its base, which prevents its retraction within the abdominal cavity. The lips of the abdominal wound are united to each other or with the base of the stump by sutures. All the portion of the stump beyond the chain of the écraseur falls at the end of several days, the rest becomes adherent to the abdominal walls, and the cicatrization is complete at the end of a month or six weeks.

Since the 21st of May, 1875, the utero-ovarian operation has been performed fifteen times. An Italian journal, (*Annali uni-*

versali di Medicina e Chirurgia, Nov. 1878), gives a statistical table of these fifteen cases; we reproduce it, as it is better calculated to show the advantages of the new method than any theoretic reasoning.

In 1875, utero-ovarian amputaton was performed once only, May 21, at Pavia, by Prof. Porro; the patient, as we have said, got well in six weeks.

In 1876, three operations; two at Vienna by Prof. Spaeth, giving one death and one success; a third, also at Vienna, by Prof. Braun, followed by death.

In 1877, four operations, all followed by death; one at Milan by Prof. Chiara; a second at Fribourg by Prof. Hegar; a third at Bergamo, by Dr. Previtali; the fourth at Berne, by Prof. Muller.

In 1878, seven operations; at Milan, by Prof. Chiara, two cases, one death and one cure; at Turin, Prof. Tibino, one death; at Liege, Prof. Wasseige, one cure and one death; at Prague, Prof. Breisky, one death; at Brescia, Dr. Peroglio, one cure.

Seven cures and eight deaths; a result not sufficient to remove the dread of Cæsarean section, but when compared with the old plan we cannot help recognizing that the process of Porro constitutes an important progress, one deserving its adoption in the practice of our hospitals.

GYNÆCOLOGY.

PECULIAR ACTION OF TINCTURE OF IODINE ON THE CERVIX UTERI. (*Bulletin de Thérap.*, August 30th, 1878.)

M. Laboulbène says, that tincture of iodine colors the healthy cervix a uniform, dark brown. But if slight ulcerations or granulations or vegetations exist, the affected patch is colored yellow. This may afford a delicate means of diagnosis. If the cervix be large and the tincture produce patches of yellow color, a neoplasm may be apprehended, with approaching ulceration in the points least colored. Under any circumstances as a healthy state is approached, the discoloration caused by the iodine assumes more and more the dark brown hue.

PATHOLOGY.

TRANSPLANTATION OF TISSUES. (*Lancet*, August 24, 1878).

Dr. Zahn has carried out a systematic series of experiments on this subject, first with hyaline and then with fœtal cartilage. The tissues into which the fragments were implanted, were connective tissue, the anterior chamber of the eye, the sub-maxillary glands and the kidneys, testicles and blood vessels. These attempts yielded negative results until fœtal cartilage was employed. If some of the latter were rubbed up with amniotic fluid and injected in the jugular vein, numerous cartilaginous growths were subsequently found in the lungs; and if used in other ways the same effect was produced. The capacity of fœtal cartilage is so great that specimens from the fœtus of a cat gave rise to nodules in the rabbit. Experiments with cartilage from an enchondroma were less successful than the above, but more so than when ordinary adult cartilage was used.

Zahn was also successful with other fœtal tissues. Entire bones were implanted, and although they did not grow as a whole, they preserved their form, and outgrowths occurred. Zahn concludes that only fœtal tissues, or those adult tissues which preserve their fœtal peculiarities, can develop in another part of the same or in another animals. Only, for instance, red marrow will do so, and the periosteum of young individuals.

MATERIA MEDICA AND THERAPEUTICS.

BUTYL CHLORAL. Liebreich. (*Lancet*, July 20, 1878).

It is known that Croton chloral seems to have a selective tendency in its action, affecting first the branches of the fifth pair of nerves.

According to Liebreich, butyl chloral possesses this same peculiarity in a more marked degree. Narcosis may follow very large doses, to be sure, but anæsthesia of the head and face may be complete before any trace of narcosis manifests itself. Liebreich therefore recommends this drug in operations on the face, when other anæsthetics are contra-indicated. For this purpose the dose is 1.0 to 2.0.

While chloral hydrate paralyzes circulation before respiration, the reverse is true with butyl chloral. L. showed this beautifully by opening the thorax in two rabbits, one narcotized with chloral hydrate, the other with butyl chloral. In each case the thorax was opened just as respiration ceased; in the former the heart was lying motionless; in the latter it continued to beat, so long as artificial respiration, which was practiced in both cases, was continued. He thought this property showed the advantage of the drug for purposes of vivisection.

L. refers to the value of the drug in that distressing complaint, tic douloureux, and advises to administer it in glycerine and water, instead of in alcohol, in doses of 1.0 to 2.0.

OIL OF ROSEMARY. Köhler and Schreiber. (*Centralbl. Med. Wiss.*, *No.* 23, 1878.)

These writers have investigated the physiological action of this drug. They find its chief action to be upon the cerebro-spinal nerve centers. The blood pressure falls owing to paralysis of vaso-motor centers in the medulla, but the heart is unaffected; and if the drug is pushed to its utmost there is only retardation of the pulse, while the respiratory center is at last paralyzed. Small doses increase and large doses diminish reflex excitability; repeated hypodermic injections of small amounts have the latter effect. Large doses antagonize the irritability of strychnia poisoning. But its most important action is on temperature, though for this purpose it must be inhaled in a vaporized form, and not given by the stomach. By the former method temperature may be reduced 8°, while by the latter it can not be lowered more than 2° centigrade. These experiments were made in rabbits and other animals.

The writers do not find that on rabbits it has any abortive action. It may excite peristalsis and so produce slight diarrhœa. It seems also to have diuretic properties, and the urine passed after its ingestion has a violaceous odor. Neither muscular irritability nor the size of the pupil are affected by its use.

If its antipyretic effects are certain, and do not differ whether a human subject be the object of experiment, or a rabbit, a most valuable remedy can be added to our armamentarium.

Items.

BULLETIN OF THE PUBLIC HEALTH, Issued by the Surgeon-General U. S. Marine Hospital Service under the National Quarantine Act of 1878. Week ended February 15th, 1879. No. 32.

OFFICE SURGEON-GENERAL M. H. S.
WASHINGTON, Feb. 19th, 1879.

Boston.—Week ended Feb. 15th. Deaths from all causes, 155, an annual ratio of 22.1 per 1,000 of the population; 18 cases of scarlet fever, 2 deaths; 22 cases of diphtheria, 9 deaths. Bronchitis caused 6 deaths, pneumonia 19, phthisis 26.

Providence.—Week ended Feb. 15th. Total deaths, 41. An. ratio, 21; 5 deaths from scarlet fever, 5 from diphtheria. "Scarlet fever prevalent and increasing."

New York.—Week ended Feb. 15th. Total deaths, 544. An. ratio, 26.3; 69 deaths from scarlet fever; 12 from diphtheria, 18 from whooping-cough, 35 from bronchitis, 55 from pneumonia, 101 from phthisis.

Hudson County N. J. (Including Hoboken and Jersey City.)—Week ended Feb. 15th. Total deaths, 61. An. ratio, 16. Enteric fever caused 3 deaths, scarlet fever 2, diphtheria 3, acute lung diseases 9, phthisis 10.

Brooklyn.—Week ended Feb. 15th. Total deaths, 222. An. ratio, 20.4; 5 cases of enteric fever, 2 deaths; 71 cases of scarlet fever, 9 deaths; 44 cases of diphtheria, 11 deaths; 40 deaths from acute respiratory diseases, 33 from phthisis.

Buffalo.—Week ended Feb. 15th. Total deaths, 31. An. ratio, 12; 4 deaths from scarlet fever, 2 from diphtheria.

Philadelphia.—Week ended Feb. 15th. Total deaths, 349. An. ratio, 21. Enteric fever caused 5 deaths, scarlet fever 9, diphtheria 9, acute pulmonary diseases 71, phthisis 60.

Pittsburgh.—2 weeks ended Feb. 15th. Total deaths 121. An. ratio, 21.7. Enteric fever caused 5 deaths, scarlet fever 3, diphtheria 11 deaths.

Baltimore.—Week ended Feb. 15th. Total deaths, 160. An. ratio, 22.8; 1 death from enteric fever, 6 from scarlet fever, 10 from diphtheria, 31 from acute pulmonary diseases, 25 from phthisis.

District of Columbia (Including Washington and Georgetown). Week ended Feb. 15th. Total deaths, 87. An. ratio, 28.3. Scarlet fever caused 3 deaths, diphtheria 2, acute pulmonary diseases 18, phthisis 18.

Chicago.—2 weeks ended Feb. 15th. Total deaths, 244. An. ratio, 14. Enteric fever caused 6 deaths, scarlet fever 5, diphtheria 16, acute lung diseases 42.

Milwaukee.—Week ended Feb. 15th. Total deaths, 40; rate, 18; 5 deaths from diphtheria.

Louisville.—Week ended Feb. 15th. Total deaths, 58. Annual ratio, 19. Diphtheria caused 1 death, acute lung affections 16, phthisis 8.

St. Louis.—2 weeks ended Feb. 15th. Total deaths, 215. An. ratio, 11.2. Enteric fever caused 1 death, scarlet fever 2, diphtheria 5, phthisis 36, pneumonia 29.

Richmond.—2 weeks ended Feb. 15th. Total deaths, 67. An. ratio, 22. Scarlet fever caused 8 deaths, acute lung diseases 9, phthisis 8.

Savannah.—2 weeks ended Feb. 15th. Total deaths, 41. An. ratio, 38. Death-rate among the negroes twice as great as among the whites.

Mobile.—Week ended Feb. 15th, 17 deaths. An. ratio, 22; 1 death from diphtheria. "City very healthy with exception of epidemic of influenza."

New Orleans.—Week ended Feb. 9th. Total deaths 87. An. ratio, 22. Acute lung diseases caused 14 deaths, phthisis 17. No deaths reported from scarlet fever or diphtheria.

San Francisco.—Week ended Feb. 7th. Total deaths, 101.

An. ratio, 17.5. Enteric fever caused 2 deaths, scarlet fever 1, diphtheria 4, acute lung diseases 18, phthisis 15.

Havana.—Week ended Feb. 15th. Yellow fever caused 1 death, small-pox 15.

Great Britain.—Week ended Feb. 1st. The average death-rate of the 23 large cities was 28. Dublin, 49; Liverpool, 36; Manchester, 35; Glasgow, 29; Edinburgh, 25; Sheffield, 25.

London.—1821 deaths. An. ratio, 26. Measles caused 23 deaths, scarlet fever 33, diphtheria 14, whooping-cough 64, acute lung diseases 541; 28 deaths from small-pox in London; 21 in Dublin.

German Empire.—2 weeks ended Jan. 18th. In 150 cities there were 7,446 deaths, an average annual rate of 26 per 1,000. Measles caused 94 deaths, scarlet fever 184, diphtheria 352, whooping-cough 105, acute lung diseases 666, phthisis 1,015.

Paris.—Jan. 24th to 30th. Deaths, 1,109. Small-pox caused 8, diphtheria 28, enteric fever 21.

Vienna.—Jan. 19th to 25th. Deaths, 42. Rate, 30. Small-pox caused 13 deaths, diphtheria 21.

St. Petersburgh.—Jan. 12th to 18th. Deaths, 623. Rate, 48. Small-pox caused 58 deaths.

Rio de Janeiro.—2 weeks ended Jan. 18th. Deaths, 393. An. ratio, 34. Yellow fever caused 30 deaths, small-pox 30, enteric fever 11, "pernicious" fever 20. No deaths from diphtheria or scarlet fever reported.

The U. S. Consul at Pernambuco reports that in the interior of the province of Ceara a severe drought has prevailed for two years and a half, no rain having fallen during that time. The excessive dryness caused the disappearance of the innumerable small streams which furnished the whole water supply of the country, the consequent death of nearly all the cattle and sheep, and the complete destruction of the usual means of subsistence of the population, which is wholly an agricultural one. The people have been reduced to subsistence on roots, cotton-pods, reptiles and any living or dead thing that would sustain life, some resorting even to cannibalism. In the winter of 1878 small-pox appeared in epidemic form and caused a frightful mortality among the starving people. A general flight of the people from

the interior to the coast cities occurred. The normal population of 25,000 in Fortaleza, the capital, was quickly raised to 100,000, the squares of the city being filled with thousands of unsheltered people dying of disease and starvation. One-half of the original population of the city have died of small-pox. In the new cemetery of Lagoa Funda, opened in the middle of last year, there were 60,000 interments up to Jan. 1st. The number of burials from small-pox alone between Nov. 1st and Jan. 1st in this cemetery were 24,470; the total interments in the city for the two months being 31,571. At Parahyba 12,000 refugees out of 15,000 who had fled to the port died, and similar distressing accounts are given of the other coast cities. The Consul estimates the usual population at 900,000, of whom 500,000 have died of disease and starvation. The Brazilian Government have expended $10,000,000 for the relief of the sufferers. At last advices slight rains have fallen in the interior, and it is believed that the worst period of the scourge has been passed.

JNO. M. WOODWORTH,
Surgeon-General, U. S. Marine Hospital Service.

AN ATTEMPT AT BLACKMAILING A PHYSICIAN, in which the other party got the worst of it.

In August of last year, a certain Joseph Clem received an injury in his right eye from being struck by a gun cap; he consulted Dr. M. F. Coomes, of Louisville, and put himself under his care for some time. He did not pay the doctor's bill for the sum of twenty-two dollars, but sued him for malpractice, alleging "that his eye was unskillfully treated by the defendant, while treating his eye as his physician and oculist, and that, by reason of said unskillful treatment, he has been damaged to the extent of one thousand dollars ($1.000), and that he fears he will lose entirely the sight of said eye because of said unskillful treatment."

Dr. Coomes, in his answer, makes the following statement:

"The lower margin of the right eye was wounded about a quarter of an inch from the inner angle; that there was a rent in the conjunctiva about one-third of an inch in length, running downward and inward from the margin of the cornea, and there

was also a corresponding rent in the sclera, which extended on into the cornea for a line or a line and a half.

There was a considerable rent in the inner and inferior quadrant of the iris, and a portion of the iris was between the lips of the wound, and was dragged out until it was almost in contact with the margin of the lower lid. The pupil was elongated downward and inward, the wound extending through the ciliary region, with considerable hemorrhage from the wound.

The plaintiff at this time could distinguish light from darkness. He said the light looked reddish, and he could not give the definite outline of any object. The cavity of the globe was filled with blood, so as to render an ophthalmoscopic examination impossible. The iris was almost hidden by blood, and the pupil was completely closed with it."

A solution of atropia (0.25 to 30.0), was dropped into the eye, and a wet compress applied.

"Defendant says that when he looked at the eye he told the plaintiff that the chances were against its recovery for visual purposes; that if any portion of the cap was buried within the cavity of the globe, the eye would be lost for visual purposes, and that even if the foreign substance was not there it was not likely the eye would ever be entirely recovered; but every chance was given the eye of the plaintiff to allow the hæmorrhage to clear up and permit a more thorough examination. Defendant told the plaintiff at the time that if the foreign body was in the cavity of the globe, violent inflammation would intervene, and that it would then be safe to remove the globe at once—inflammation did afterwards set in.

Defendant requested plaintiff to consult any physician or oculist he desired, and assured him the exercise of such a right would cause him (the defendant) no unkindly feeling, but, on the contrary, he would be gratified if the opinion of some one else would be had.

Plaintiff did go to another oculist, and made an appointment to have the injured eye removed. But for some reason unknown to defendant, this was not done."

Before the doctor's answer was presented to the court, the attorney for the plaintiff attempted to compromise the suit.

These attempts were renewed from time to time, first offering to accept $500, then $100, then $50; and, finally, after failing to induce the court to strike out all that part of the defendant's answer relating to the treatment of the plaintiff, his attorney took a copy of the answer and went around the city trying to find some doctor willing to express an unfavorable opinion of defendant's treatment of plaintiff. Failing in this, he refuses to go to trial, and moves the dismissal of the suit he has brought.

Whereupon the court dismissed the suit, but, at the same time adjudged that the defendant recover of the plaintiff his costs herein expended, and may have execution.

TESTS FOR CARBOLIC AND CRESYLIC ACIDS, AND CREASOTE. (*Chemist and Druggist.*)

Pure carbolic acid takes up 26 to 27 per cent. of water to form a hydrous acid. Cresylic acid absorbs only 13 or 14 per cent. Absolute carbolic acid is solid at ordinary temperatures, and the hydrous acid in freezing mixtures. Neither absolute nor hydrous cresylic acid, nor creasote show any signs of freezing on exposure to the same cold. Absolute carbolic acid dissolves in 10.7 parts of cold water; absolute cresylic acid in 31 parts. Benzol mixes with either in any proportions and separates the water from the hydrous acids; benzoline mixes with cresylic acid and creasote in all proportions, but carbolic acid will not take up more than half its volume. The two acids mix in any proportion with Price's glycerin, but creasote will not dissolve in it. A mixture of one part of carbolic acid with one of glycerin is not precipitated by the addition of three parts of water; a similar mixture of cresylic acid and glycerin is precipitated by adding two parts of water. The addition of one drop of a 10 per cent. aqueous solution of ferric chloride to 15 C. C. of an aqueous solution of either acid causes a permanent violet-blue coloration; when creasote is similarly tested a blue color results, but almost instantly changes to green or brownish yellow.

Cresylic acid constitutes an ingredient or impurity of commercial carbolic acid.

ANNOUNCEMENTS FOR THE MONTH.

SOCIETY MEETINGS.

Chicago Medical Society—Mondays, March 3 and 17.
West Chicago Medical Society—Mondays, March 10 and 24.

CLINICS.

MONDAY.

Eye and Ear Infirmary—2 p. m., Ophthalmological, by Prof. Holmes; 3 p. m., Otological, by Prof. Jones.
Mercy Hospital—1:30 p. m., Surgical, by Prof. Andrews.
Rush Medical College—2 p. m., Dermatological and Venereal, by Dr. Hyde; 3 p. m., Medical, by Dr. Bridge.
Woman's Medical College—2 p. m., Dermatological, by Dr. Maynard.

TUESDAY.

Cook County Hospital—2 to 4 p. m., Medical and Surgical Clinics.
Mercy Hospital—1:30 p. m., Medical, by Prof. Hollister.

WEDNESDAY.

Chicago Medical College—1:30 p. m., Eye and Ear, by Prof. Jones.
Eye and Ear Infirmary—2 p. m., Ophthalmological, by Dr. Hotz.

THURSDAY.

Chicago Medical College—1:30 p. m., Medical, by Prof. Quine.
Rush Medical College—3 p. m., Diseases of the Nervous System, by Prof. Lyman; 4 p. m., Diseases of the Chest, by Prof. Ross.

FRIDAY.

Cook County Hospital—2 to 4 p. m., Medical and Surgical Clinics.
Mercy Hospital—1:30 p. m., Medical, by Prof. Davis.

SATURDAY.

Rush Medical College—2 p. m., Surgical, by Prof. Gunn.
Chicago Medical College—2 p. m., Surgical, by Prof. Isham; 3 p. m., Neurological, by Prof. Jewell.
Woman's Medical College—11 a. m., Ophthalmological, by Dr. Montgomery.

Daily Clinics, from 2 to 4 p. m., at the Central Free Dispensary, and at the South Side Dispensary.